THE EFFECT OF FISCAL DECENTRALISATION ON THE FINANCIAL CONDITION OF DISTRICT MUNICIPALITIES

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I hereby declare that I have read and understood the regulations governing the submission of Master of Commerce dissertations, including those relating to length and plagiarism, as contained in the rules of the University, and that this dissertation conforms to those regulations.

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ABSTRACT

The adoption of decentralised systems of governance in its various forms across the world represents one of the most important reforms of the past generation. In South Africa, through a plethora of legislative reforms post 1994, the framework of developmentalism and decentralisation underpin the structure and functioning of the local government system. The new onerous legislative responsibilities bestowed on local government included the significant objectives of promoting social and economic development. Given however the myriad of challenges in this sphere of government, the need to find meaningful, suitable and sustainable solutions are even more pressing. By employing a two-way error component fixed panel data regression technique, this study explores the impact of fiscal decentralisation arrangements in South Africa on the financial wellbeing of the district municipalities across the length and breadth of the country. The data reveals that district municipalities in South Africa are not able to self-generate a meaningful amount of revenue and as a result they are heavily dependent on intergovernmental transfers. The results from the regression models reveal that the fiscal decentralisation arrangement have no meaningful impact on the financial condition of district municipalities in South Africa, given their lack of fiscal autonomy. The current two-tier system of governance between local and district municipalities is not consistent with the tenets and intended outcomes of a decentralised system and there is a need to restructure this system to make it more fiscally autonomous and sustainable for municipalities to be able to fulfil legislative responsibilities.

Key words: governance, fiscal decentralisation, district municipalities, financial condition, service delivery

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Section 1: Introduction

1.1 Background

The world has increasingly turned towards the practise of decentralisation to assure democratic governance, this as academics, practitioners and development stakeholders universally recognise the importance of good governance practices towards human development and alleviating chronic poverty and injustice (Work, 2002). The concept and practise of decentralisation has been in existence in society for a while, but came to the forefront of the developmental agenda in the 1980s, along with the renewed global emphasis on governance and human-centred approaches to human development (Work, 2002). Faguet (2011) asserts that decentralisation is one of the most important reforms in the past generation due to the number of countries which have been affected by it and the potentially deep implications for the nature and quality of governance.

Rodden (2006, p. 1-2) adds to this notion by suggesting that “other than transitions to democracy, decentralisation and the spread of federalism are perhaps the most important trends in governance around the world over the last 50 years”. Decentralisation reforms around the world have been centrally motivated by the quest to improve governance (Faguet, 2011). Work (2002, p. 6) defines decentralisation as “the transfer of responsibility for planning, management and resource raising and allocation from the central government and its agencies to the lower levels of government”. Fiscal decentralisation, which is a form decentralisation, involves the transfer of revenues of the central government together with the powers to raise revenues to local sources. It further encompasses the transfer of expenditure, where the local government bears the responsibility for implementing expenditure functions (Porcelli, 2009; Siddle & Koelble, 2016). In Columbia, decentralisation was designed as an explicit response to violence; in South Africa, decentralisation was an essential component for its transition from apartheid towards democracy; in Ethiopia, due to the striking social diversity, decentralisation was aimed at giving political representation to different ethnic groups; while in both India and Tanzania decentralisation reforms were adopted to improve the low levels and quality of public goods (Faguet, 2011).

The transition of South Africa towards a constitutional democracy has brought drastic changes towards governance practices in the country. Siddle and Koelble (2016) suggest that the two principles defining the South African local government are developmentalism and decentralisation

– both these features are clearly reflected in the South African Constitution. Under a decentralised framework underpinned by the Constitution, the South African local government has been transformed and given critical developmental role towards rebuilding local communities and environments, as the basis for a democratic, integrated, prosperous and non-racial society. Black communities under the apartheid regime were severely neglected and existed outside the purview of municipal authority. The result was that many of these communities suffered serious backlogs in social service delivery (Ndletyana & Muzondidya, 2009). Ndletyana and Muzondidya (2009, p. 24) note that "the immediate post-1994 period saw the promulgation of a raft of legislation and policy. These were intended to integrate and deracialise municipal government, enrich its resource base and capacity, and promote popular participation with municipal government to render it accountable to local citizenry".

Local government has been the primary site for the provision of services in South Africa since 1994. There has been tremendous progress in the delivery of water, electricity, sanitation and refuse removal at local level (Department of Cooperative Governance and Traditional Affairs, 2016). In a report by the Department of Corporative Governance, titled *Local Government Back to Basics*, the department acknowledges that, despite various service delivery achievements, municipalities are confronted with a series of problems. Some of the challenges in municipalities highlighted in the report include institutional incapacity, the low rates of collection of revenue and the sourcing of appropriately skilled personnel. These challenges undermine the sustainability of local governments and their ability to deliver services to communities. The long term impact of this is the breakdown of trust in government institutions and councillors by communities (Department of Cooperative Governance and Traditional Affairs, 2016)

The ability of local governments to provide for the needs and preferences of its citizens generally depends on the financial resources available and how these resources are allocated, distributed and managed (Dennis, 2004). The fiscal decentralisation system in South Africa, which is how government revenues are collected, allocated and distributed, has a significant bearing on the financial conditions of all government entities, including local governments. The concept of financial condition adapted to the public sector, can be defined as the ability of the government to provide public services while satisfying present and future obligations (Cuadrado-Ballesteros & Bisogno, 2018). Wang, Dennis and Tu (2007) state that the term financial condition has four associated dimensions: (a) cash solvency dimension, which considers the ability of an entity to manage its liquidity and the ability to honour its current liabilities; (b) budget solvency dimension, which considers the ability of an organisation to generate sufficient revenues to finance its service obligation; (c) long-run solvency dimension, this relates to the ability of an organisation to be able to honour its long-term commitments; and lastly (d) service level dimension, which considers the ability of an entity to provide and sustain a certain level and quality of services to citizens.

1.2 Research Problem

The South African Constitution established rigorous legislative obligations on local government (Stanton, 2009). The objectives of local government, as established in Chapter 7 of the Constitution include, the provision of democratic and accountable governments to local communities, the provision of services to communities in a sustainable manner, to promote safe and healthy environments, the promotion of social and economic development and to encourage the involvement of communities and community organisation in the matters of local government. The adoption of the decentralisation framework introduced through the South African Constitution was built for the right reasons – "it promises democratic decision-making from the grassroots level upwards; it promises citizen participation in both democratic structures and developmental debates; and it promises to deliver appropriate vehicles for the establishment of democratic legitimacy to the new democratic dispensation" (Koelble & Siddle, 2014, p. 1117).

For the newly established autonomous spheres of government, the constitutional mandate for local government is not an easy feat to achieve given the assigned heavy legislative burden (Stanton, 2009). Structural challenges local governments have had to contend with include the creation of larger areas of jurisdictions, massive service delivery backlogs that municipalities were tasked with addressing, lack of capacity and other institutional weaknesses such as corruption and nepotism, the complete redefinition of local government roles as set out in the Constitution, the devolution of several new powers and function and the new and often difficult relationships between councillors and officials (Siddle & Koelble, 2016). In the present state municipal governments in South African are in a state of paralysis, crippled by service delivery failures and dysfunction (Koelble & Siddle, 2014). The major deficiencies in the local government as presented by Koelble and LiPuma (2010) include severe skills shortage in financial and technical matters and the lack of enforcement mechanisms to oversee the financial processes of the municipalities and ensure accountability to the electorate. The Auditor-General in the MFMA 2017/2018 Consolidated General Report on Local Government Audit Outcomes, goes on to highlight the continuing deterioration of accountability in financial and performance management. The report goes on to reveal that the reasons for this deterioration include (a) audit outcomes have regressed and irregular expenditure remains high; (b) lack of consequences against municipal officials who fail to comply with legislation, continuously underperform and whose actions and decisions cause financial losses; and (c) a hostile audit environment with increased contestation of audit findings.

Given the significant challenges within local government, and especially within the two-tier system of governance between district and local municipalities, there have been continuous call from various stakeholders around the need for restructuring the legal framework of municipalities. The African National Congress (ANC) as the governing party, had resolved in their policy conferences that the role of district municipalities need to be reviewed and clarified including the review of the financing and the grant support models for districts (African National Congress, 2017). The Community Law Centre (2008) additionally advocate for the redesigning of the governance system of district municipalities to make them more functionally efficient.

Linking the objectives of fiscal decentralisation in South Africa with the urgent need to reform the local government sphere, presents the literature gap this study looks to explore. This study considers two contrasting theories on fiscal decentralisation and specifically its impact on the financial condition of district municipalities in South Africa. As outlined by Stone (2015), the traditional fiscal federalism literature suggests that a multilevel system of subnational governments, can more efficiently meet the needs of their citizens in the provision of public goods. Furthermore, this mechanism can improve accountability to local citizens and the competition between other local governments for resources. This leads to an improvement in the financial condition of subnational governments. The modern, second-generation literature into fiscal federalism provide a critique against this view. The literature argues that fiscal decentralisation systems can create perverse incentives that encourage local public officials to not steward public finances responsibly (Oates, 2008). It further suggests that local governments face structural imbalances of both an increase in expenditure obligation and limited revenue raising opportunities, which is coupled with a persistent decline in intergovernmental fiscal support. This in turn produces weaker financial conditions for local governments (Stone, 2015).

1.3 Research Questions

The critical questions to be addressed in this study are:

1. What effect does the current fiscal decentralisation system have on the financial condition of district municipalities in South Africa?
2. Using fiscal decentralisation levers, how can district municipalities in South Africa improve their financial wellbeing to become financially sustainable?

1.4 Research Objectives

The research objective of this research is:

1. To use statistical modelling to determine if the current fiscal decentralisation arrangements have a positive or negative effect on the financial health of district municipalities.
2. To use the findings of the study to determine how district municipalities can improve their financial wellbeing within a decentralised framework.

1.5 Research Design

The study will be quantitative in nature. To conduct this study, the sample population will be the entire 44 district municipalities in the country. The period of analysis will be over the five financial years where there is complete financial data available, that is, from the 2014/2015 financial year to the 2018/2019 financial year. The primary source of data will from the National Treasury as they have a repository of all local government financial data.

The statistical modelling approach is to use is fixed panel data modelling techniques to conduct the analysis. Panel data analysis allows for the study of a particular subject within multiple, periodically observed sites over a defined time frame. The combination of time series with cross-sections can enhance the quality and quantity of data, whereas it would have been unachievable with only one of these two dimensions (Yafee, 2003). In developing our financial condition framework, our financial condition dimensions will encompass cash solvency, long-run solvency, budget solvency and service solvency.

1.6 Significance of the Study

Local government is the primary point in which citizens interface with the government (Department of Cooperative Governance and Traditional Affairs, 2016). It is tasked with the construction, maintenance and development of basic infrastructure. It is further tasked with being the developmental arm of government together with the added responsibility to bring democracy to the local level (Koelble & LiPuma, 2010). It is supposed to be the building block towards the reconstruction and development of the country and a pillar towards establishing a society in which citizens can engage meaningfully with the different institutions of the state (Department of Cooperative Governance and Traditional Affairs, 2016). District municipalities are envisioned to play a key role in the development of rural communities and supporting local municipalities to fulfil their constitutional mandate. They form part of the broader government objective towards building an integrated and inclusive rural economy as outlined in the National Development Plan (Financial and Fiscal Commission, 2016).

Given the significant role and responsibility bestowed to local government, there has been much attention and investment in literature, media coverage and by various institutions of government. A significant amount of research, including work by Koelble and Siddle (2014); Ndletyana and Muzondidya (2009); Stanton (2009) and Steytler and Jordan (2005) have been undertaken towards understanding the challenges in the functioning of local government and even ways and measures as to how to address these problems. This study aims at looking into fiscal decentralisation, as one of the fundamental frameworks in which the current system of local governance is built upon and explores its relationship on the financial wellbeing of district municipalities.

The insights sought from this study will hopefully contribute positively towards the policy discussions around restructuring the powers and functions of local government, specifically in relation to district municipalities, and more broadly around improving the functioning of the two-tier system of governance between district and local municipalities.

1.7 Organisation of the Study

The rest of the study is arranged as follows; section two provides a summary of some of the important literature relevant to this study. Section three provides the South African framework for decentralisation and the transformation of local governance. Section four establishes the methodology applied in the study. Section five provides an analysis and discussion the results, while lastly, section six provides a conclusion of the study.

Section 2 – Literature Review

2.1 Introduction

Over the past generation, decentralisation has been one of the most important reforms, both in terms of the nature and quality of governance and also on the number of countries who have adopted it (Faguet, 2011). Rodden (2006) further adds that, other than transitions to democracy, decentralisation and the spread of federalism are perhaps the most important developments in governance globally over the last 50 years. Bardhan and Mookherjee (2005) suggest that the movement towards decentralisation has been motivated by the dissatisfaction with previous centralised forms of governance, whereby there has been a perception that the monolithic governments foster an environment for high levels of rent seeking, corruption and lack of accountability of government officials. Given the increase in the adoption of decentralisation, there has been a marked increase in its research to deepen the understanding of the topic and its links to outcomes such as growth, inequality, political stability, education and health indicators and levels of investment (Faguet, 2011; Schneider, 2003). Litvack, Ahmad and Bird (1998) explain the widespread adoption of decentralisation across the world to a variety of reasons, these include: the advent of multiparty political systems in Africa; deepening democratisation in Latin America; transition from an authoritarian to a market economy in Eastern Europe; the need to improve provision of public services to large populations in East Asia as well as to address the challenges of geographical diversity and ethnic tension in other countries. According to Tanzi (2002), the spread of decentralisation has been further supported by a more globalised world. That is, through globalisation, market areas have developed which are no longer identical to national territories and thus certain geographical areas within a country have become more closely linked economically to the markets in other countries than to the national market. This process has brought the desire for some regions to become economically less dependent on the national government.

2.2 Conceptualising Decentralisation

There is a startling diversity in the definitions and measures to the concept of decentralisation amongst researchers (Schneider, 2003). Decentralisation can take many different forms and has several dimensions. A wide variety of institutional restructuring are encompassed by this label and several variants may be operating at the same time within a country (Litvack et al., 1998).

While this proliferation of definitions and measures are considered necessary to account for the wide variety of accounts, there is concern that this proliferation will lead to the erosion of precision and impede the ability to assess different types of decentralisation (Schneider, 2003). Schneider (2003) refers to decentralised systems as those in which central authorities possess a smaller share of fiscal resources, grant more administrative autonomy and cede a high margin of political responsibility for political functions. Schneider (2003) provides a framework towards thinking of decentralisation and adds that decentralisation has three core elements – fiscal, administrative and political.

2.2.1 Fiscal Decentralisation

Fiscal decentralisation theories address decentralisation with the focus of maximising social welfare, which is presented as a combination of economic stability, allocative efficiency and distributive equity (Schneider, 2003). Porcelli (2009) defines fiscal decentralisation as a two-dimensional policy that entails either decentralisation as a tax instrument whereby local governments have the authority to raise taxes or decentralisation of expenditure where the local governments bear the responsibility of implementing expenditure function. The best indicator of the level of fiscal decentralisation is the percentage share of subnational revenues and expenditure. The revenue aspect refers to all cash inflow to a given level of government - this includes taxes, loans and grants – while expenditures refer to any cash outlays by a given level of government (Schneider, 2003).

2.2.2 Administrative Decentralisation

The administrative interpretation addresses the administrative effects of granting local jurisdictions autonomy from the central government. The autonomy is constituted through policy making authority, personnel control and control over public finances (Schneider, 2003). The level of administrative autonomy has three branches which ranges from the lowest degree of autonomy to those with the highest level of autonomy.

- Deconcentration, refers to the lowest level of administrative autonomy. Under this form of decentralisation, the state transfers responsibilities from central government agencies to regional offices. This transfer of responsibilities changes the spatial distribution of authority without significantly changing the autonomy from higher levels of government. Select administrative functions, which also have very limited decision making powers are passed down to the subnational government (Ebel & Yilmaz, 2003; Schneider, 2003).

- Delegation considers the transfer of policy responsibilities to local governments and semiautonomous organisations that are not controlled by the central government but remain accountable to it. The entities have a substantial amount of autonomy in their decision making. This form of relationship can be described in the form of a principal-agent relationship whereby the central government is the principal with the local government as the agent (Litvack et al., 1998).
- Devolution refers to the form of administrative decentralisation with the most degree of autonomy. Under devolution, local governments are provided with clear discretionary power to decide independently over the allocation of resources and to design and execute development plans and programmes within broad national policy guidelines (Mulugeta, 2014; Schneider, 2003). In a devolved system, local governments have the autonomy to elect their own mayors and councils, raise their own revenues and have autonomy to make investment decision within clear and legally recognised geographical boundaries to exercise their authority (Litvack et al., 1998).

An exercise to measure the degree of administrative autonomy can be done through examining the control of local revenue. The percentage of revenues from taxes provides an indication of degree of subnational control of resources (Schneider, 2003).

2.2.3 Political Decentralisation

Political decentralisation entails the transfer of policy and legislative power to citizens and their local elected representatives (Ebel & Yilmaz, 2003). Political decentralisation focuses on mobilisation, organisation, participation and contestation of political interests. Decentralised political systems are those in which political participants and issues are significant at regional level and are at least, partially independent from those at the national level. (Schneider, 2003). Elections address issues of representation and provide the primary access for political agents to gain access to legislative and executive authority. This makes elections the most obvious indicator of representation occurring at local levels and thus provides the most valid indicator of political decentralisation (Schneider, 2003).

2.3 Theoretical Development of Fiscal Decentralisation

Within the public economic theory, the topic of fiscal decentralisation was generally introduced in the middle of the twentieth century (Vo, 2010). Notable scholars and early contributors in this field, referred to as first generation theorist into fiscal federalism, who have made seminal contribution on the subject include Charles Tiebout, Wallace Oates, Richard Musgrave and James Buchanan (Vo, 2010). For the rest of this subsection, we will take a closer look at the contributions made by the above scholars towards developing the theoretical literature that underpin fiscal federalism.

2.3.1 Tiebout Sorting

Tiebout on the paper in 1956, titled "*A pure theory of local expenditure*", first introduced the concept of impure public goods. The intention was to analyse fiscal and political decentralisation in terms of competition among local citizens, whereby their mobility between localities providing the mechanism for revelation into their preferences (Vo, 2010). Tiebout's introduction of the term impure public goods, was developed to distinguish it from the term of pure public goods. Pure public goods are characterised by being non-exclusionary and non-rival in their consumption. That is, once a public good is produced no one can be excluded from it (non-exclusionary) and that the marginal benefit from the consumption of the public good does not change even if the number of consumers increase (non-rival) (Vo, 2010). An example of a pure public good would be the national defence services while in the case of an impure public good an example would be a public library. Tiebout (1961) posits that public goods have a spatial extent on their benefits and these benefits may not accrue equally to all residents of a region. Tiebout argues then, that most public goods are in fact impure public goods as they are subject to congestion. As the number of users increase, the goods become rival or progressively rival beyond a locally defined boundary.

Tiebout's hypothesis follows that, given the mobility of residents, their preferences will be revealed, and residents will end up at, or be as close as possible, to where their demand of impure public goods is met while taking into consideration the cost supplying this demand. This phenomenon is generally known as Tiebout sorting. The policy implication which is derived from this contribution is that, policies which encourage residential mobility and public knowledge of costs and benefits of services, will foster mobility of residents to sort into homogenous groups whose demands for certain impure public goods are similar, which will contribute towards efficient allocation of government expenditure (Vo, 2010).

2.3.2 Musgravian Fiscal Framework and Decentralisation

In 1959, Musgrave published the widely cited book, "*The Theory of Public Finance – A Study in Public Economy".* The book introduces three branches of public finance, which are: economic stabilisation, income distribution and resource allocation (Musgrave, 1959). These branches present a benchmark for which issues in public finance can be treated. For the specific context of fiscal federalism, they provide a useful framework in the analysis of the constraints and potential benefits of fiscal decentralisation (Vo, 2010).

Under the first branch of economic stabilisation, the key issue is whether fiscal decentralisation improves or detracts from economic stability and the general economic goals of the state (Vo, 2010). The view from this is that fiscal decentralisation does not serve to promote the macroeconomic stabilisation imperative, in fact, macroeconomic stabilisation represents a constraint on the degree at which fiscal powers can be devolved to local governments (Oates, 1972). The second branch of public economics relates to the subject of income distribution. The view taken here is that "decentralization of fiscal arrangements does not tend to systematically advance society's income distribution objectives because economic interdependences between the economies of subnational jurisdictions act to reduce any diversity in the distribution of goods that would exist across lower level governments" (Vo, 2010, p. 659). In summary, it suggests that income distribution can be better achieved if implemented at a national level.

This leaves us with the final branch of resource allocation and how decentralisation of fiscal arrangements can be interrogated from this perspective. In this subset, the value of fiscal decentralisation is established due to two main reasons. Firstly, subnational governments may be better able to understand how to maximise benefits from the use of resources in their own jurisdiction and thus able to allocate scarce resources much more efficiently. Secondly, the character of impure public goods places local governments in a better position to better understand local preferences and be able to allocate resources more cognisant with these preferences (Vo, 2010). It is from this perspective, the ability to allocate resources efficiently, that the value of fiscal decentralisation can be revealed (Vo, 2010).

2.3.3 Fiscal Equivalence and the Decentralisation Theorem

Olson, in his 1969 publication, "*The Principle of Fiscal Equivalence",* introduces the notion of fiscal equivalence within the general framework of fiscal decentralisation (Vo, 2010). The concept of fiscal equivalence posits that for every collective good provided for by the government, there is a unique boundary for which a separate government is needed. This is such that there is an alignment between those who receive the benefit of the collective goods and those who have to bear the cost of funding for the goods (Olson, 1969). According to Vo (2010, p. 662) the notion of fiscal equivalence has a positive association with the " efficiency goal of public economics with aligning the costs and benefits of impure public good provision with multi-tiered federal systems, each with overlapping physical boundaries, but each with unique boundaries relating to the provision of specific public goods."

The following seminal contribution was provided for by Oates, in 1972, titled "*Fiscal Federalism"*. Oates in developing his theory on fiscal decentralisation, blends Tiebout's contribution of impure public goods and Olson's notion of fiscal equivalence. Oates argues that due to the different tastes for public service by residents, then there should be a variation in the provision of impure goods and services from the government (Vo, 2010). Oates asserts that, welfare is maximised when specific public goods are provided for by local governments whose jurisdiction is aligned with the subset of national population for which the demand for the specific public goods and services is homogenous (Vo, 2010). From this insight, as cited by Vo (2010), the decentralisation theorem proceeds that:

> For a public good – the consumption of which is defined over geographical subsets of the total population, and for which the costs of providing each level of output of the good in each jurisdiction are the same for the central or the respective local government – it will always be more efficient (or at least as efficient) for local governments to provide the Pareto-efficient levels of output for their respective jurisdictions than for the central government to provide any specified and uniform level of output across all jurisdictions (Oates, 1972, p. 35).

2.3.4 Public Choice and Leviathan

The contribution by Brenan and Buchanan (1980) consider the view of fiscal decentralisation from the lens of controlling the size of the public sector (Oates, 1999). In developing their hypothesis, they view the government as a monolithic agent, a Leviathan, that seeks to maximise the extraction of tax revenue from the economy (Vo, 2010). From this view, the design of the constitution and associated institutions have a significant objective in placing of a variety of constraints that limit the Leviathan's access to tax and other fiscal instruments. Fiscal decentralisation, can then, significantly constrain the growth of the size of the public sector (Oates, 1999). Brenan and Buchanan (1980, p. 184) assert that competition among governments in the context of "the interjurisdictional mobility of persons in pursuit of fiscal gains can offer partial or possibly complete substitutes for explicit fiscal constraints on the taxing power". In general, the Leviathan hypothesis and public choice approach to fiscal federalism highlight the advantage of fiscal decentralisation as a force for maintaining a smaller government (Vo, 2010). The hypothesis follows that "total government intrusion into the economy should be smaller, *ceteris paribus*, the greater the extent to which taxes and expenditures are decentralised, the more homogeneous are the separate units, the smaller the jurisdictions, and the lower the net regional rents" (Brennan & Buchanan, 1980, p. 185).

In summary, the traditional theory of fiscal federalism tends to link the process of fiscal decentralisation with the enhancement of government's responsiveness to public demands and to the overall improvement in economic efficiency by better allocating scarce resources to the associated public preferences. It has further been able to provide a perspective on intergovernmental fiscal structures that show how fiscal decentralisation can better assist in the function of the public sector (Oates, 1999; Vo, 2010)

2.4 Emerging Second Generation Theory of Fiscal Decentralisation

Over the last two decades there has been an emergence of new literature on the topic of fiscal decentralisation, referred to as the second generation theory of fiscal federalism which draws its views from outside public finance literature (Oates, 2008). According to Oates (2008), there are on two main tranches that underpin the development of the second-generation theory. The first tranche stems from a series of perverse actions by the decentralised lower levels of government. The second tranche considers the rent-seeking behaviours of public officials who do not act to maximise the welfare of their constituencies, in contravention of the assumption from the traditional theory thinking. Below we discuss each of these parts in more detail.

2.4.1 Tranche I – Fiscal Institutions Approach

The literature presented from this view contest the largely favourable outcomes argued by the traditional theorist and argue for quite unfavourable outcomes from decentralised fiscal arrangements (Oates, 2008). The theory presented reveals how decentralised systems can bring about perverse incentives to public officials to allow them to mismanage and misuse public fiscal resources. At the core of the literature are the fiscal and political institutions which are the source of these incentives that directly lead to perverse fiscal decisions which have a severe negative impact to the functioning of the public sector (Oates, 2008).

One of the key elements the literature considers is the issue of soft budget constraints, its sources and implications on fiscal behaviour and how these can be hardened. Rodden (2000) suggests that soft budget constraints can promote local governments to over borrow, overspend or even under tax on the expectation that the central government will inevitably bail them out. Where the central government provides an assurance of fiscal assistance, local public officials tend to under provide for outputs or programs that improve the local economy's capacity to adjust to exogenous shocks or even in lean periods (Oates, 2005). These expectation of assistance undercuts the incentives for prudent fiscal behaviour and create a moral hazard (Oates, 2008; Stone, 2015).

To impose fiscal discipline in lower tiers of government, Rodden (2000) advocates for strong fiscal restrictions to be imposed by the central government, especially in developing and transitioning economies. Further to this, Rodden (2000) provides three ways in which institutional fiscal reforms can be introduced or strengthened to enhance accountability and facilitate fiscal discipline. Firstly, there should be clear separation of responsibilities between the central and subnational governments. Secondly, local government should have sufficient revenues available to implement their spending obligations. And thirdly, a well-designed fiscal transfer arrangement system between the various levels of government. On this, what is important is the development of transparent and predictable fiscal transfer policies that are credible.

2.4.2 Tranche II – Political Economy Approach

The second tranche of literature represents a more formal and theoretical interrogation of fiscal decentralisation. That is, it can be regarded as a conventional evolution of the theory of fiscal federalism, approached through the modern theory of political economy (Oates, 2008). The central premise under the political economy approach is to systematically attempt to model government behaviour, at various levels, by taking into account the institutions and processes, such as elections and legislature, which determine the choice of fiscal policies in practise (Lockwood, 2005).

The beginning focus of this approach is to challenge Oates' decentralisation theorem. Lockdown (2005) challenges the two main assumptions of the decentralisation theorem. The assumptions that, firstly, public officials maximise the welfare of their constituencies and secondly, the assumption that the provision of goods and services by the central government are uniformly provided at local level are dropped. With regards to the first assumption, Lockdown (2005) provides a summary of surveys based on the idea of a benevolent, welfare maximising government. The results were mixed and could not give a rigorous account of the accountability benefits of decentralisation. Besley and Coate (2003) found that the second assumption is neither empirically nor theoretically satisfactory. They point out that there is empirical evidence by the federal government of the United States, whereby various provisions of goods were not uniformly provided for across the different states. Furthermore, they argue that there is no theoretical basis for why the central government charged with providing services would not be able to differentiate these provisions in accordance to the heterogeneous tastes of local residents.

The developed political economy models, whereby the centralised outcomes are determined by the central legislature, seek to characterise and compare between centralised and decentralised outcomes. Insights from these models suggests that centralisation tends to allow greater coordination of fiscal decisions while decentralisation may more effectively, address preference matching and increased accountability (Oates, 2008). The basic trade off from these insights are that the provision of local goods involves the gains from improved coordination under centralisation and the enhanced sensitivity of local preferences under decentralisation (Oates, 2008). Besley and Coate (2003, p. 2628) puts it as such that "the key insight remains that heterogeneity and spill overs are correctly at the heart of the debate about the gains from centralization".

2.5 Fiscal Decentralisation Systems

Different countries take up varying forms of decentralisation depending on the objectives driving the change in the structure of the government. This is partly why there is no prescribed set of rules governing the decentralisation process that apply to all countries (Ebel & Yilmaz, 2003). The general underpinning of fiscal decentralisation encompasses the political, economic and institutional foundation of intergovernmental fiscal relations. This ranges from examining the efficiencies of public institutions to rationalising and streamlining fiscal transfer mechanisms and supporting the social safety net (Ebel & Yilmaz, 2003). Ebel and Yilmaz (2003, p. 17) further add that a well-considered fiscal decentralisation policy should not only enhance local autonomy where local governments are allowed "to act independently within their own sphere of competence in designing revenue and expenditure policies but also promote political accountability, economic efficiency and transparency". The design of a decentralised system should even go further beyond addressing the assignment of responsibilities between different spheres of government and objectives of equity, efficiency and transparency. It should further be able to address the objective of equity amongst people and places, maintaining national integrity and political stability. The challenge then, is to design an intergovernmental fiscal system that associates decentralisation reform with the social, economic and development of the society (Ebel & Yilmaz, 2003). The design process of a fiscal decentralisation system is forged by four pillars: expenditure assignment, revenue assignment, intergovernmental transfers and subnational borrowing (Bird, 2000). These four elements are discussed below.

2.5.1 Expenditure Assignment

The first step in the design of an intergovernmental fiscal system is the assignment of expenditure. The neglecting of clear assignment of expenditure responsibilities lead to a weak decentralised system and a fiscally overburdened central government. Additionally, from a fiscal management perspective, a formalised assignment of expenditure allows for greater certainty in the budget planning at all levels of government (Ebel & Yilmaz, 2003; McLure & Martinez-Vazquez, 2000). For a stable and meaningful decentralisation system, there requires an institutional framework that is both clear and well defined in the assignment of expenditure responsibilities among different levels of government. It further requires adequate budgetary autonomy to be able to fulfil the assigned tasks at various levels of government (McLure & Martinez-Vazquez, 2000). It is reiterated by McLure and Martinez-Vazquez (2000) that there is no absolute best way for deciding how responsibilities are to be allocated across different tiers of government and that the most adequate way to make a determination is to ascertain how the goals or objectives set up by the government can be best achieved. Ebel and Yilmaz (2003) note that in a report prepared by the US Advisory Commission on Intergovernmental Relation on Government Functions and Processes, it lists the criteria towards assigning services. The report suggest that expenditure assignments should be made to government units that can:

- supply a service at lowest possible cost;
- finance a function with the greatest possible fiscal equalisation;
- provide a service with adequate popular political control; and
- administer a function with an authoritative, technically proficient and cooperative fashion

In the South African fiscal system, the objectives of local government are established in the Constitution. Section 152 (1) (a) to (e) provides the key function of local government which are:

- to provide democratic and accountable government for local communities;
- to ensure provision of services to communities in a stable manner;
- to promote social and economic development;
- to promote safe and healthy communities and
- to encourage the involvement of communities and community organisations in the matters of the local government.

A detailed account of the powers and functions of municipalities are provided for in various Acts of Parliaments, which are discussed in greater detail in later sections of this study.

2.5.2 Revenue Assignment

As far as possible, services provided by the state should be financed by the user through various methods, this is both fair and efficient and can also encourage responsible usage of the nation's economic resources (McLure & Martinez-Vazquez, 2000). The principle that a local government should be significantly self-financing is important for the functioning of the local government system. It allows for the promotion of accountability to local residents for the functions performed by the municipality and further empowers residents to actively participate by expressing their preferences and ensuring municipalities remain responsive to their needs (Siddle, 2011). There should be an assignment of taxes that are related to the benefits of its spending for each tier of government. That is, the proper assignment of taxes, should be linked to the assigned expenditure responsibilities (McLure & Martinez-Vazquez, 2000).

Ebel and Yilmaz (2003) summarises some of the general principles in public finance literature relating to the assignment of revenue at different levels of government. They include firstly, that redistributive taxes should be assigned to the central government. Uniform redistributive taxes reduce local distortion of economic activities. Secondly, taxes that are subject to economies of scale in their collection efforts should be centralised and thirdly, services provided by subnational government should be financed through user charges and other local fees and taxes that are related to the benefits.

The capacity for revenue generation in South Africa is unequally distributed between the three tiers of government. Provincial governments have a limited set of revenue sources which are limited to motor car licence fees, hospital fees, casino and horse racing fees. Municipal taxing powers, which are subject to national legislature, are limited to a set of services or rates to compensate municipalities for the general service expenditure. These revenue streams include traffic fines, business licenses, rental fees, entrance fees for use of municipal facilities and fresh produce markets (Stanton, 2009). Municipalities are further able to generate revenue from property rates, where the Municipal Property Rates Act (No. 6 of 2004) provides regulation of power for municipalities to impose rates on properties. Revenue from property taxes is exclusively spent within a municipality and the provincial and national government are not allowed to levy property rates or share in the revenue collected from property rates (Stanton, 2009). Additionally, municipalities are legally entitled to levy surcharges on municipal services. These surcharges are normally generated from trading in bulk services such as water and electricity reticulation (Stanton, 2009).

2.5.3. Intergovernmental Transfers

In the assignment of revenue and expenditure responsibilities, there rises vertical and horizontal imbalances that are present in any intergovernmental system. Vertical imbalances occur as a result of a mismatch between the expenditure constraints of a local government in comparison to its associated revenue raising ability and capacity. Horizontal imbalances arise when the fiscal capacity to carry out similar functions differ across different jurisdictions (Ebel & Yilmaz, 2003). Inequalities in income levels in various jurisdictions explain the occurrence of fiscal imbalances, where poor districts find it difficult to collect tax revenue and to generate other sources of revenue as compared to their more affluent counterparts (McLure & Martinez-Vazquez, 2000).

In addressing these imbalances, Ebel and Yilmaz (2003), suggests that governments can enact different forms of transfer mechanisms, which include, the sharing of revenues and tax bases or the establishment of conditional or unconditional grant systems. Additionally, Ebel and Yilmaz (2003) cite three measures intergovernmental transfer systems can incorporate to address any transfer imbalances. Firstly, the central government and subnational governments can share revenues based on a formula or they can share a tax base, where one of them would apply a surcharge on the other's tax. Secondly, the choice of the transfer system is dependent on the objective of the intergovernmental system. In instances where the objective is merely addressing a vertical imbalance, this can be achieved by the provision of an unconditional grant and lastly, horizontal imbalances can be addressed through equalisation transfers from central government to lower levels of government.

Under the South African system, section 227 (1) of the Constitution provides for the broad notion of intergovernmental transfer to local governments. It stipulates that local government and each province:

- is entitled to an equitable share of revenue raised nationally to enable it to provide basic services and perform functions allocated to it; and
- may receive other allocation from national government revenue, either conditionally or unconditionally.

The annual division of revenue process is an intergovernmental revenue sharing mechanism to subsidise the different tiers of government in terms of their respective service expenditures. The process entails dividing national revenue by firstly netting off the contingency reserves and interest payment obligation by the national government. The remainder of the revenue is then divided vertically between the three tiers of government and lastly these allocations are then divided horizontally, in other words, shared between the different national government departments, provinces and municipal categories (Stanton, 2009). Local governments receive fiscal transfers from national and provincial government through a variety of mechanisms. The transfers can range from direct cash transfers, either through a conditional or unconditional grant. Another way of transfers come is indirectly through the form of asset transfers. Unconditional grants provided to local government impose limited restrictions on how the proceeds should be used while conditional grants come attached with restrictions on how the funds can be used and are only disbursed to the local government only if they have met certain set of requirements set out by the higher tier of government (Stanton, 2009).

2.5.4. Subnational Borrowing

Subnational borrowing is an important aspect in the devolution of fiscal responsibilities to lower levels of governments. Borrowings are able to fast-track infrastructure development which result in employment opportunities and have a general positive effect on local economic performance. The benefits of these projects, of infrastructure and educational projects can benefit both current and future generations to come. Through the access to additional financial resources, local governments are able smooth out the potential mismatch between expenses incurred and revenues generated without any disruption in essential services (Ebel & Yilmaz, 2003).

To address the pervasive incentives to borrowing by local government and lending institutions, there requires a well drafted regulatory framework on subnational borrowing. The framework should address issues including standardised accounting practices for local governments, disclosure of subnational government's liabilities, repayment capacity and it should go further to address the incentive structures that could give rise to the moral hazard problem (Ebel & Yilmaz, 2003).

The Local Government: Municipal Finance Management Act 56 of 2003, provides regulation of debt financing relating to local government. The Act stipulates that municipalities can incur both short-term and long-term debt. The Act allows for short-term debt to be incurred to bridge shortfalls within a financial year, in expectation of a specific and realistic anticipated income to be received within that financial year, or bridge capital needs within a financial year to be repaid from a specific funds to be received from enforceable allocations or long-term debt commitments. In terms of long-debt provisions, the Act stipulates that debt can only be incurred for the purposes of capital expenditure on property, plants or equipment for the purposes of achieving the objectives of the local government as set out in the Constitution.

The borrowing of local governments is seen to be one of the most challenging issues relating to finances of local governments. Currently, municipalities can only access debt financing through development agencies or local private lenders. Given the precarious state of local government finances, most lending institutions do not regard municipalities as being credit worthy and hence a large proportion of them do not qualify for loans (Siddle, 2011; Stanton, 2009).

2.6 Summary

The above presented literature details the contrasting views of the first generation and modern generation theories of fiscal decentralisation on their impact on the financial condition of local government. Additionally, this section provides general principles into the design of an efficient intergovernmental fiscally decentralised system. This presentation provides a framework for this study in two ways. Firstly, it provides a basis in which to assess the structure and effectiveness of the current fiscal system in South Africa and secondly, it provides a framework to assess the role of legislative and fiscal structures on how they have an effect on the financial health of local governments.

Section 3 – Decentralisation in South Africa

The objective of this section is aimed at tracing the developments of decentralisation in South Africa and how this informs the functions of the current local government system. It does so by providing a brief historical context of the practise of decentralisation within the African continent. It will further discuss the legislative framework which forms basis of the decentralised system under the democratic dispensation. Additionally, the section reviews the political posture of the governing party as it aims to address the challenges which are imbedded within local government structures.

3.1 Decentralisation in Africa

The phenomenon of decentralisation is not new is Africa. Decentralisation has occurred across Africa under colonial rule, military regimes and democratic governments (Ribot, 2002). In the colonial periods, decentralised systems were developed to manage Africans under administrative rule rather than to enfranchise them – the systems were referred to as "associations" and "indirect rule" by the French and British governments respectively (Ribot, 2002). Under the policies of association and indirect rule, institutional segregation was created. This meant that Africans were relegated to live in the spheres under Customary Laws, while the Europeans were governed under Civil Laws (Ribot, 2002).

At independence, African governments inherited a system in which local governments were tools of administrative management. These governments continued to use local governments as administrative units following independence. Local provisions such as health care, education, road construction and local taxation were transferred to central government's control. The tendency towards centralisation reflected the politics of the time, of military rule, in which governments of the time were aiming at consolidating political power (Ribot, 2002). This political ideology was reinforced by the period's dominance of one-party state and socialist governments. Decentralisation over this period took the form of deconcentration, to expand the reach of the state (Ribot, 2002).

Structural adjustment programmes in the 1980s and 1990s, required the cutting down of many central governments and required many governments to adopt decentralisation reforms. These reforms adopted a more democratic language – away from the imposition of centralised monolithic values and towards a more rights-based culture (Ribot, 2002). During this wave of decentralisation, policies of decentralisation had moved away from political justification of the 1950s and 1960s, of national stability and garnering political support - towards developmental values of decentralisation such as greater representation of citizens, supporting local governance and the improvement of the efficiency and effectiveness of service delivery (Ribot, 2002).

3.2 Journey towards Decentralisation in South Africa

Under the apartheid system, black communities evolved outside the scope of influence and care of municipal authority (Ndletyana & Muzondidya, 2009). In 1962, Indian and Coloured communities through the amendment of the Group Areas Act (No. 41 of 1950) made provisions for the establishment of Management Committees and Local Affairs Committees while African communities were left out. It was only in 1977, that the regime of the time introduced some municipal authority over African communities such as community councils, while in 1982 enacted the Black Local Authorities Act (No. 102 of 1982) (Ndletyana & Muzondidya, 2009). The neglect of African communities resulted in serious backlogs in the provision of social services (Ndletyana & Muzondidya, 2009).

Post 1994 was characterised by the promulgation of raft of legislations and policy reforms (Ndletyana & Muzondidya, 2009). Adding to this, Ndletyana and Muzondidya (2009, p. 24) explain that, “these were intended to integrate and deracialise municipal government, enrich its resource base and capacity, and promote popular participation within municipal government to render it accountable to local citizenry”. This notion is further elaborated by Parnell (2002) who adds that, the policy reforms under the banner of a developmental local government were introduced to address the huge service backlog in primarily black residences that the new government had inherited from the apartheid administration. In this new system, constitutional decentralisation of functions and powers to local government is a fundamental feature of local governance (Cameron, 2003).

The framework towards local government transformation in South Africa was developed through the establishment of the Interim Constitution of 1993 and the Local Government Transition Act (No. 209 of 1993) (Cameron, 2003). In explaining the different periods of structural reform of local governance in South Africa, Cameron (2003), segregates three distinct phases: pre-interim, interim and final phases

- Pre-interim phase: This was a period between the first national elections in 1994 but prior to the first local government elections. Transitional Local Councils and Transitional Metropolitan Councils were established in non-metropolitan and metropolitan areas respectively, as local negotiating forums. These councils were responsible for governance of local government until local elections were held (Siddle, 2011)
- Interim phase: This period was after the local government elections of 1995/1996 but prior to the implementation of the final constitution model. Over this period, previously divided jurisdictions were amalgamated. This process led to substantial increase in population which were served by municipalities (Siddle, 2011). Through the interim constitution, local government for the first time were provided a constitutionally protect place in the institutional framework of South Africa (Siddle, 2011)
- The final phase began with the implementation of the final constitutional model at local level. This final phase commenced with the holding of municipal elections in 2000 under new local government dispensation (Cameron, 2003; Siddle, 2011)

3.3 Legislative and Policy Reforms

The below subsection presents the legal framework which underpin local government in South Africa, including a selection of key statutes which underpin the fiscal arrangement system.

3.3.1 The Constitution of the Republic of South Africa – Act 108 of 1996 (“The Constitution”)

Local government, for it to exist and function, it must have a solid constitutional and legal basis and in the case for South Africa, this has been more than adequately provided for in the Constitution and with a plethora of legislative Acts of Parliament (Koelble & Siddle, 2014). “The institutional framework for government in South Africa was established in 1996 when the country adopted its first democratic Constitution. National government, provincial government and local government were established as three elected spheres of government, each with distinctive functional responsibilities. The Constitution requires the three spheres of government to function as a single system of cooperative government for the country as a whole" (Department of Provincial and Local Government, 2007, p. 4). The adoption of the Constitution in 1996 was a crucial step towards the decentralisation process in South Africa (Siddle, 2011). The Constitution addresses key issues which are relevant towards developing a decentralised system of governance. It covers amongst others, "the distinct nature of local government, the need for intergovernmental cooperation, the right for municipalities to govern the local government affairs of its community, powers and functions of municipalities and funding of municipalities" (Siddle, 2011, p. 66)

Local government is required to prioritise basic needs in its vicinities by administering several supporting functions for the higher spheres of government. It provides for the main mechanism of service delivery. Its duties includes the construction, maintenance and development of basic infrastructure, including water supplies, electrification, housing, sanitation and refuse collection (Koelble & LiPuma, 2010). Municipalities were given the added responsibility of leading economic and social development in their jurisdictions. Chapter 7 of the Constitution which specifically addresses issues around local governance, dedicates a distinct section towards addressing the duties of municipalities, where local government is required to structure its administration and budgeting to give priority to the basic needs to communities and to promote social and economic development (Ndletyana & Muzondidya, 2010).

Section 155(1) of the Constitution makes provision for three categories of municipalities:

- Category A: A municipality that has exclusive municipal, executive and legislative authority in its area
- Category B: A municipality that shares municipal, executive and legislative authority, in its area, with a Category C municipality within whose area it falls
- Category C: A municipality that has municipal, executive and legislative authority in an area that includes more than one municipality

Category A municipalities refer to metropolitan municipalities. These are municipalities established in major urban areas and are described as self-standing institutions given that they are authorised to perform within their areas all the powers given to local government by the Constitution (Siddle, 2011). Category B refers to local municipalities while category C refers to district municipalities. Within the typical geographical jurisdiction of a district municipality, there would be several local municipalities located within that jurisdiction (Siddle, 2011). District and local municipalities share executive and legislative authority in their respective areas, while the powers and functions between the two categories are outlined in accordance to the Local Government Municipal Structures Act 117 of 1998 (Siddle, 2011).

3.3.2 The White Paper on Local Government ("The White Paper")

The release of the White Paper of Local Government in 1998 was an important policy initiative towards strengthening local governance in the country. The document makes provision for a more powerful and strategic role for district municipalities as they were seen as necessary towards the promotion of district-wide integrated development planning, provide bulk services and build capacity in local areas (Cameroon, 2003).

In accordance with Siddle (2011), the White Paper is instrumental towards understanding the broader framework on local government. Amongst its many dimensions it emphasises the importance of co-operative governance between the local, provincial and national government. In line with the Constitution, the White Paper further supports the notion of local governments having a developmental mandate. To support this objective, it proposes four key outcomes: (a) the provision of household infrastructure and services; (b) the creation of liveable integrated cities, towns and rural areas; (c) local economic development and (d) community empowerment and redistribution (Siddle, 2011).

According to the White Paper (1998), the system of municipal finance would need to be restructured in line with the Constitution to be able to meet various policy principles which include, revenue adequacy and certainty; financial sustainability; the effective and efficient use of resources; an environment which allows for accountability, transparency and good governance and an emphasis of equitable and redistributive policies.

The paper further promoted the need for fiscal autonomy, in line with national legislation, to local governments and view it as essential towards creating a sustainable and accountable form of governance. For municipalities to be able to fulfil their assigned functions, they require adequate resources and budgetary powers. At the disposal of local governments, the paper proposes various fiscal instruments and policies which they can use as revenue generating mechanisms.

These include property taxation, fuel levy and user charges. Intergovernmental transfers aid significantly for local governments in raising revenue. The White Paper addresses two forms of transfers, vertical and horizontal. The transfers would be on an equal share basis and would either be aimed at supplementing the municipal operational costs or conditional grants for capital projects (Siddle, 2011).

3.3.3 Other Legislative Reforms

There are several key legislative documents which regulate the structure, functions and powers of local government. Some of these important pieces of legislature are listed below.

a. Local Government: Municipal Structures Act – 117 of 1998

The purpose of the Act is to provide for the establishment of municipalities in accordance to the requirements relating to categories and types of municipality. The Act further defines the type of municipality that may be established within each category. Importantly, the Act provides for the appropriate division of functions and powers between categories of municipalities. Regulation of the internal system, structures, the office-bearers of municipalities and the provision of appropriate electoral systems are also provided for.

b. Local Government: Municipal Systems Act – 32 of 2000

The Act provides for myriad of issues around matters of municipal planning and performance management. Included amongst the many other provisions the Act encompasses, it provides core principles and mechanisms for municipalities to move progressively towards the social and economic upliftment of their local communities and to ensure universal access of essential services for all. The Act further provides for community participation, to empower the poor and ensure that municipalities put in place service tariffs and credit controls that take their needs into account. It further provides for credit controls and debt collection procedures.

c. Local Government: Municipal Finance Management Act – 56 of 2003

The purpose of the Act is to make provision for the sound and sustainable management of the financial affairs of municipalities and other institutions in the local sphere of government. The Act also establishes treasury norms and standards for the local government and provision for other connected matters. Amongst others, the Act also details issues relating to fiduciary responsibilities of municipal officials, including municipal managers and chief financial officers.

d. Local Government: Municipal Property Rates Act – 6 of 2004

The Act provides municipalities with the powers to impose rates on properties and for a fair and equitable valuation methods of properties. It makes provision to implement a fair and transparent system of exemption, reduction and rebates through their rating policies. Additionally, it provides for the exclusion of certain properties from rating in the national interest.

3.4 Structure and Function of District Municipalities

District municipalities are formed by a number of local municipalities that fall under a certain district. This is set out from the Constitution, where district municipalities are referred to as category C municipalities. Section 155(1) (c) of the Constitution stipulates that Category C municipalities, have executive and legislative authority in an area that includes more than one municipality. The Constitution leaves the division of authority between category B and C municipalities to Parliament. Section 155(3) (c) of the Constitution provides that motional legislation must "make provision for an appropriate division of powers and functions between municipalities when an area has municipalities of both category B and category C". While section 155 (4) further adds that the legislation must also account for the sustainable and equitable provision of municipal services.

The White Paper on Local Government of 1998 gives flesh to the purposes that district municipalities should pursue as well as the outcomes that they should achieve (Steytler, 2003). The White Paper acknowledges that district municipalities are uniquely different across the country. It thus suggests that district governments in the execution of their functions, should adopt a variable governance system in which different districts exercise different sets of powers as a function of their geographical areas, local circumstances and local municipalities that comprise them.

Steytler (2003) summarises the purpose of district municipalities as stated by the White Paper as to-

- build local municipalities where there is no capacity;
- initiate the economic development of the district;
- plan land use in the district; and
- to provide for the basic needs of people living in deprived areas.

The Municipal Structures Act 117 of 1998 was initially enacted to give effect to the overall objectives, purposes and outcomes identified in the White Paper (Steytler, 2003). The Act provided the legal framework for a single-tier metropolitan government system and the two-tier local government system governing district and local municipalities.

Section 83(3) of the Act provides for the purposes of a district municipality, in such that, a district municipality must seek to achieve the integrated, sustainable and equitable social and economic development of its area as a whole by-

- ensuring integrated development planning for the district as a whole;
- promoting bulk infrastructural development and services for the district as a whole;
- building the capacity of local municipalities in its area to perform their functions and exercise their powers where such capacity is lacking; and
- promoting the equitable distribution of resources between the local municipalities in its area to ensure appropriate levels of municipal services within the area.

The Municipal Structures Act, under Section 84(1) (a) to (p) defines the functions and powers of district municipalities and any residual power not included in this section are vested to local municipalities. It is also important to note that these functions and powers bestowed upon district municipalities are not absolute and can under certain circumstances be altered (Financial and Fiscal Commission, 2016). Section 85 of the Act allows for the MEC of local government in the province to adjust the division of functions and powers between a district and a local municipality. This re-allocation of function can only be done only if the municipality lacks the capacity to perform the function or exercise the power. The Financial and Fiscal Commission (2016) suggests that this has created highly variable systems of district governments, which have resulted in the real risk of confusion, duplication of functions and costly overlaps, contestations and even conflict in intergovernmental relations.

3.4.1 District Governance and Corporation

As presented by the Financial and Fiscal Commission (2016), the central rationale for the establishment of district municipalities, under a two-tier governance structure is to provide services that transcend multiple municipal jurisdictions in a more cost effective manner. These district wide services include roads, airports, solid waste disposal sites, firefighting services, abattoirs, markets and local tourism. Additional benefits from this governance structure are the economies of scale borne from services with high fixed investment costs such as bulk infrastructure commitments (Financial and Fiscal Commission, 2016).

To manage the relationships between municipalities exercising jurisdiction over the same geographical area, a number of legislated processes and structures have been introduced (Steytler & Jordan, 2005). Section 88(1) of the Municipal Structures Act asserts that a district municipality and the local municipalities within the district must cooperate with one another by assisting each other. The establishment of District Councils are meant to be a vehicle to bring together local municipalities in a district in order to benefit from the integrated planning for the district, mutual support and economies of scale from the provision of bulk services (Community Law Centre, 2008). The District Council is composed of both representatives of the local municipalities and representatives of the district electorate, with a 60% majority of the council constituted by indirectly elected local councillors from the local councils (Community Law Centre, 2008).

The Intergovernmental Relations Framework Act 13 of 2005, was enacted upon with the objective to give effect to the constitutional requirements regarding the structures and institutions to promote intergovernmental relations and mechanisms and procedures to facilitate dispute resolution (South African Local Government Association, 2016). The legislation is further purposed to promote friendly relations and coordination across the three spheres of government in the implementation of policy and fulfilment of their functions as required by the Constitution (South African Local Government Association, 2016). The Act further provides for the establishment of District Intergovernmental Forums. These are designed for the district municipality and all its local municipalities to “meet to ensure integrated and co-ordinated planning to eliminate duplication of effort and to ensure effective and efficient service delivery to the community” (South African Local Government Association, 2016, p. 3).

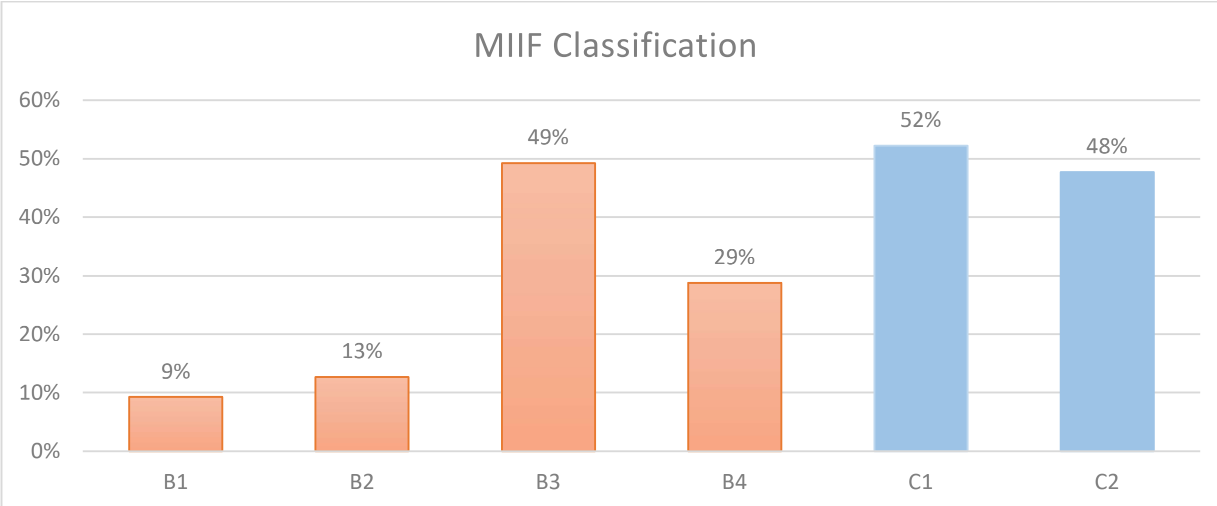
3.4.2 Powers and Functions of District Municipalities

As previously established, municipalities can be separated into three categories. The Municipal Infrastructure Investment Framework (MIIF) allows for further classification of municipalities to allow for a more detailed analysis. Under this classification, category B municipalities, that is local municipalities, are separated into four groups based on the municipality's ability to access resources and ability to exercise its powers and functions. District municipalities, category C, are divided into two groups based on which ones are water authorities and which ones are not (Municipal Demarcation Board, 2018). The classification as presented below:

- B1: Secondary cities: local municipalities with the largest budgets.
- B2: Local municipalities with a large town as core.
- B3: Local municipalities with relatively small populations and a significant proportion of urban population but with no large town as core.
- B4: Local Municipalities which are mainly rural with, at most, one or two small towns in their area.
- C1: District municipalities that are not water services providers and generally have few service delivery functions.
- C2: District municipalities that are water services providers and often have substantial obligations

The below figure 1 summaries the number of municipalities in categories B and C, in percentages, under each MIIF classification. In summation, there are 205 local municipalities and a further 44 district municipalities. As can been seen, the majority of local municipalities fall under category B3. While only 21 out of the 44 (48%) district municipalities are water service providers, falling under category C2.

Figure 1: MIIF Classification of District and Local Municipalities



Source : (Municipal Demarcation Board, 2018)

There are four core functions district municipalities are supposed to perform, that is, provide for (a) potable water, (b) bulk supply of electricity, (c) domestic waste-water and sewage and (d) sewage disposal systems (Joseph, 2012). However, evidence suggests that district municipalities perform no real function in urban areas. That is, in district jurisdictions with strong local municipalities, these core functions are being provided for by the local municipalities (Joseph, 2012). Joseph (2012) further shows that there is a geographic concentration of C2 district municipalities in certain parts of the country. The 19 of the 21 C2 municipalities are found in three provinces, namely Eastern Cape, Kwa-Zulu Natal and Limpopo. While the other two are in the North-West. These are the areas which were previously referred to as homeland. An inference that can be drawn from this is that district municipalities in former homelands were able to retain their water service functions because of the weak and newly established local municipalities in these regions. Additionally, in former homelands there were no local government structures prior to 2000, hence there was an unwillingness to grant the local municipalities the function of providing water services (Joseph, 2012).

For the effective functioning and fulfilment of their mandates, it is vital that municipalities are able to generate their own income. The ability to generate own sources of income is directly linked to the services municipalities are able to provide (Municipal Demarcation Board, 2018). District municipalities are hamstrung in this instance. District municipalities are not able to raise any income from property rates and electricity charges. Only from the sale of water and provision of sanitation service that C2 district municipalities are able to generate their own source of income.

The picture is completely different for other two municipal categories (Municipal Demarcation Board, 2018). For metropolitan municipalities, they accrue 70% of all property rates collected in the country. The sale of electricity is also an important source of metropolitan municipal own generated revenue contributing about 47% of total revenue. For local municipalities, income raised from electricity charges is also a vital component of generating income, where for B1's this provides 52%, B2's 45%, B3's 50% and B4's 35% of their total own generated revenue (Municipal Demarcation Board, 2018)

The ability of municipalities to being able to generate their own sources of revenue, allows for municipalities to be less dependent on government grants and subsidies. Given the two tier structure in local government and a large number of district municipalities not fulfilling their complete suite of statutory obligations, it makes them significantly reliant on grant funding as their primary source of income (Joseph, 2012; Municipal Demarcation Board, 2018). Mlokoti (2007) argues further that increased reliance of external funding for district municipalities is also as a result of national government removing regional services council (RSC) levies as a local tax instrument. The base of RSC levies was the gross sales and total payrolls of businesses within municipal regions which contributed about 34% of total revenue for district municipalities. The RSC levies were an important source of revenue and of fiscal authority which allowed district municipalities the ability to fund, prioritise and monitor implementations of projects at local municipalities. Mlokoti (2007) additionally points out that the loss of RSC levies income hampers the ability of district municipalities to be able to fulfil key functions of coordination, redistribution and cross-subsidisation as prescribed in the White Paper on Local Government.

3.4.3 Challenges Faced by District Municipalities

The Community Law Centre (2008) finds that the two-tier district model, with the exception of a few cases, has not yielded the intended outcomes for the constituent local municipalities. They find that instead of developing an integrated and interrelated governance system between district and local municipalities, a distinctive two-tier system has developed. The system being characterised by relations of hierarchy and lack of coordination. This type of relationship easily degenerates into unproductive competition with the overlap of functions and powers. District and local municipalities often compete for the same resources and opportunities (Community Law Centre, 2008).

Mlokoti (2007) puts across that a two-tier local government system, which has two political government institutions with the same constitutional mandates, and expecting them to coexist harmoniously creates a recipe for conflict. The shifting of power and functions between district and local municipalities by provincial MECs create uncertainly and confusion on which tier is ultimately responsible for the fulfilment of various functions. The jurisdictional tension is further compounded because a shift in functions may affect the revenue base of a municipality.

3.5 Performance of Local Government

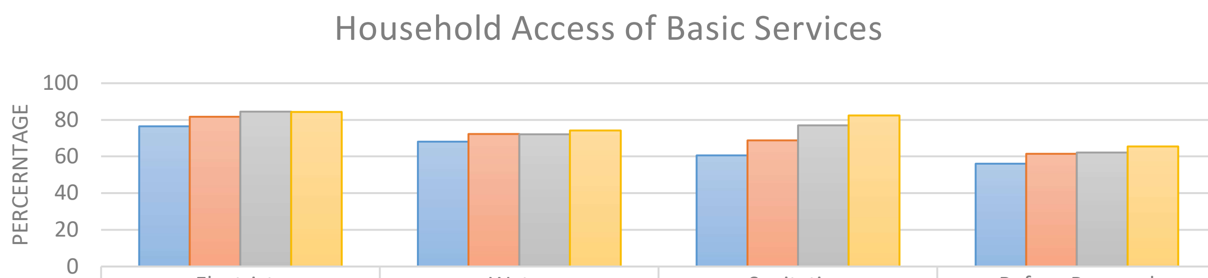
The following subsection summarises the performance of local governance under the democratic administration. It reviews the performance of local government in the provision of basic services and further presents some structural challenges which have been persistent within the local government space.

3.5.1 Service Delivery & Constitutional Mandate

In the 2017/2018 Annual Report, the Department of Corporative Governance and Traditional Affairs point out that “local government remains a critical building block in the creation of a capable and developmental state. If there is not a strong and sustainable local sphere of government, the national strategic objectives to overcome poverty, inequality and unemployment, and the transformation of society as articulated in the National Development Plan, will not be realised” (Department of Cooporative Governance and Traditional Affairs, 2018, p. 25). Amongst the functions and duties of local governments as set out in the Constitution is to give priority to the basic needs to the community.

The below figure 2 shows the aggregate national level of the provision of basic services in accordance with the data from the General Household Survey at five-year intervals from 2002 to 2017 by Statistics South Africa. Examining the trend there seems to be a notable sign of progress and improvement. Across all the elements which are regarded as basic services – that is, provision of electricity, access to water, access to sanitation and refuse removal services – there has been as gradual increase in access in the provision of these services from 2002 to 2019.

Figure 2: Household access to basic services at national level



	Electricty	Water	Sanitation	Refuse Removal
2002	76.6	68.1	60.7	56.1
2007	81.7	72.4	68.9	61.5
2012	84.6	72.2	77	62.2
2017	84.4	74.2	82.5	65.6

Source: (Stats SA, 2017)

There has been significant progress in the provision of basic services in the country, particularly in rural areas and informal urban settlement which were communities which were deliberately excluded from being serviced during apartheid (Presidency, 2014). Challenges which continue to hamper efficient delivery of basic services are borne from the deterioration in functionality of municipal infrastructure due to poor operation and maintenance in some municipalities. An example of this is that, while some households may have access to a tap, water may not be coming out of the tap (Presidency, 2014). Further challenges in increasing access to basic services towards the 100% level to households include the rapid migration from rural to urban areas, high density informal settlements and difficulties in rolling out bulk infrastructure in remote rural areas (Presidency, 2014).

3.5.2 Challenges in Local Government

The Department of Cooperative Governance and Traditional Affairs (2016) acknowledges that despite some service delivery achievements, municipalities across the country are faced with a series of problems which in some instances have led to the catastrophic breakdown of services. The department reflects that the service delivery protests against municipalities reveal community frustration against failures in local government which have generated a negative narrative and perception against municipalities. Some of the challenges in local government highlighted include institutional incapacity, the low rate of collection of revenue, inappropriately skilled personnel and inadequate public participation. The department further sights the widespread instances of rent seeking and corruption amongst public officials as issues that cause a break down in trust by communities to local government institutions and representatives (Department of Cooperative Governance and Traditional Affairs, 2016).

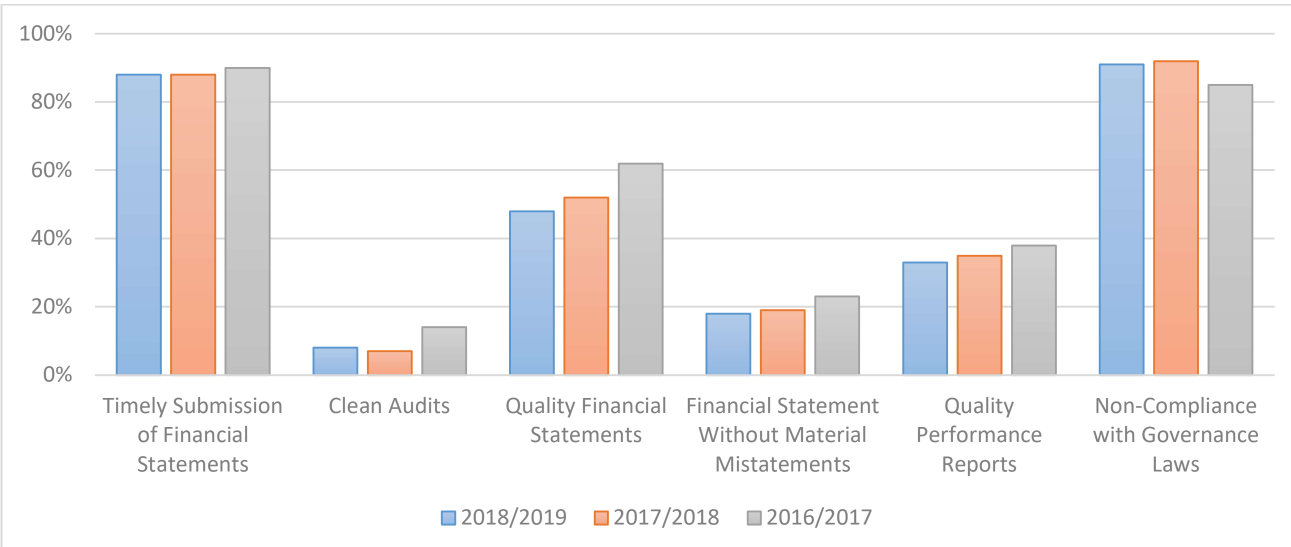
Koelble and Siddle (2016) summarise and arrange the challenges faced by municipalities into three categories: institutional, structural and environmental. Under institutional issues, matters which relate to the lack of capacity in terms of skilled personnel, the poor management of financial resources, the lack of governance and internal accountability systems and the poor relations with communities they operate in are presented. In terms of structural challenges, issues relating to the inappropriate funding model, excessive legislative demands, as well as the challenges related to intergovernmental coordination are presented (Siddle & Koelble, 2016). Lastly, socioeconomic issues prevalent in the country are presented as some of the environmental issues affecting municipalities. These include the poor performance of the national economy, poverty, unemployment and an unskilled labour force. Other environmental factors include geographical jurisdictions which are too large for municipalities to effectively provide services and the phenomenon of urbanisation which continuously put pressure on limited resources (Siddle & Koelble, 2016).

3.5.3 Financial Challenges within Local Government

The Auditor-General (2019) in the 2017/2018 MFMA Consolidated General report continues to highlight the ongoing deterioration of accountability for financial and performance management. The report goes on to reveal that the reasons for this deterioration are (a) audit outcomes have regressed and irregular expenditure remains high; (b) the lack of consequences against municipal officials who fail to comply with legislation, continuously underperform and whose actions and decisions cause financial losses; and (c) a hostile audit environment with increased contestation of audit findings.

In the annual audits of local municipalities, the Auditor-General examines the following aspects, (a) the fair presentation and absence of material misstatement in financial statements; (b) the reliability and credibility of performance information and (c) compliance with key legislation governing financial matters (Auditor-General, 2020). The below graphical representation depicts the key audit outcomes over the past three financial years. The trend over the three financial years shows a regression on all the selected audit outcomes. In reviewing the financial statements within local government, the Auditor-General (2020) concludes that municipalities are being crippled by debt and being unable to pay for water and electricity; there is inaccurate and lacklustre revenue collection; expenditures that are unauthorised, irregular, fruitless and wasteful; and a high dependence on grants and assistance from national government. The main audit outcomes of the past three financial years are summarised in figure 3 below.

Figure 3: Summary of Audit Outcomes over the three financial years



Source: (Auditor-General, 2019, 2020)

The Public Audit Amendment Act 5 of 2018, became effective from 1 April 2019. The rationale for the amendments includes:

- to provide for certainty regarding the discretion of the Auditor-General regarding certain audits;
- to provide for the Auditor-General to refer suspected material irregularities arising from an audit to a relevant public body for investigation; and
- to provide for the Auditor-General to issue a certificate of debt where an accounting office failed to recover losses from a reasonable person.

Makwetu (2020, p. 3) suggests that “should these new powers be interpreted as a constructive contribution to revitalising the concept of accountability, a strong foundation for proper financial management and related service delivery will emerge”. While in support of this amendments, Makwetu (2020) continues to emphasise and advocate for government entities to implement preventative controls which discourage the emergence of material irregularities. Preventative controls are able to promote transparency, strengthen accountability and are cheaper than relying on investigations which are onerous and only happen once transactions have occurred (Makwetu, 2020)

3.6. The ANC and Local Government Policy

The African National Congress (ANC), given its role as the national governing party, its policy views and convictions have a significant bearing on the shape of local government reforms (Joseph, 2012). The rest of this subsection reflects on some of the more recent policy views by the ANC relating to local governance in the country.

3.6.1. The 2012 Policy Document on Legislature and Governance

The ANC's 2012 policy document on legislature and governance builds of the resolutions adopted at the ANC 52nd National Conference of 2007, the National General Council of 2010 and the 2010 Provincial and Local Government Summit. The document acknowledges the pressing need to address the challenges facing local government, which it identifies as the most challenged sphere of government and the direct bearing this has on the need to accelerate service delivery. Other issues linked to local governance which the document discusses include "matters of demarcation; political governance; a differentiated model for local government; the two-tiered system of local government leading to proposed reforms on the role of District Councils" (African National Congress, 2012b, p. 3)

Challenges identified by the ANC relating to the functioning of local government include the collapse of municipalities, the financial viability of most of the rural municipalities, the demarcation of municipalities and also the role of ANC structures on providing political oversight of municipalities. The paper further accounts for the fact that despite the many advances in service delivery under the ANC government, the pace and quality of service delivery in many parts of the country do no align with the expectations of many of the citizens in the country. These issues are most prevalent in rural municipalities where service delivery is hampered by poor governance and accountability, poor financial management and also lack of critical skills in senior management positions (African National Congress, 2012b).

Recommendations presented by the document include the need to clarify the role of district municipalities. The ANC point to the fact that the current status quo is not optimal and needs to be reviewed. The ability of municipalities being able to raise most of their own funding is only applicable to only very few municipalities and hence many municipalities lack a sustainable revenue base. Other recommendation linked to addressing issues in local governance include:

- putting in place a differentiated approach to municipal planning, financing and support;
- emphasis must be towards increasing the share of nationally raised revenue to local government;
- enhancing administrative and financial capabilities of municipalities; and
- government must review the demarcation process and the role, functions, scope and composition of the Municipal Demarcation Board

Lastly, the policy document considers the two-tier governance system in local government arrangement governing both local and district municipalities. It provides two opposing views aimed at addressing the challenges found within this two-tier governance mechanism. The first recommendation is to leave the two-tier system as is. This would also mean retaining the inefficiencies associate with the system as well – that is, "the absence of a clear model for districts, unstable functional arrangements, the mismatch between revenues and expenditure, and conflict over resources and authority" (African National Congress, 2012b, p. 20). Under this recommendation, policy and institutional reform will be required to correct these problems. The alternative approach would be to abolish the two-tier system and move towards more category A municipalities. Implication associated with this approach include reducing the number of municipalities, re-demarcation and allocation of district functions to local municipalities and provinces. It is envisioned that this process will help in reducing the level of complexity in the system and also being able to link accountability of service provision to Ward level (African National Congress, 2012b).

3.6.2. The 53rd National Conference Resolutions

The 53rd National Conference of the ANC was held in December of 2012 in Mangaung, which coincided with the centenary celebration of the governing party. The ANC cite that the resolutions taken in the conference are in general agreement with the positions as set out in the 2012 Policy Conference.

One of the key features under the Legislature and Governance commission, was the emphasis around the need for more integrated corporative governance. The African National Congress (2012a) resolved that there needs to be a review of the powers and functions of the three spheres of government to provide better clarity with the objective of facilitating improved service delivery and development. There was an emphasis that the other spheres of power should support local governments in a manner that does not erode their powers and functions. The call for an integrated corporate government included the need for all spheres of government to work better and closer with State Owned Enterprises, Development Finance Institutions, other public entities and with civil society as well.

Another important resolution involving the structure and organisation of local government, was around the premise of having a differentiated local government model. The ANC asserts that given the significant differences in the character of municipalities, even those belonging to the same category, there needs to be a differentiated approach in terms of their powers and functions, funding support and manner to support their capacity building. Related to this, they resolve that strong local municipalities should not be located within the jurisdiction of district municipalities and that government must develop a policy and regulatory framework to enact this differentiated approach (African National Congress, 2012a).

3.6.3. The 54th National Conference Resolutions

The most recent ANC National Conference was held in December of 2017 in Johannesburg. The policy context under the Legislature and Governance commission reiterates the need to build a developmental state which is aimed at fast tracking service delivery and addressing nationwide economic development objectives. Key to achieving this and linked to the National Development Plan is having a capable state in all three spheres of government. The ANC assert that it is fundamental for the state to be able to drive economic and societal transformation but correctly point out that the state, to date, has not been able to demonstrate sufficient capacity to be able to drive this change (African National Congress, 2017).

The resolutions passed in the conference are in line with previous ANC policy adopted in past conferences. The ANC however note that, although some policies have been previously adopted, they have either not been implemented at all or those which have been implemented, have been done so not within the spirit intended.

The document further reiterate that “the ANC government established a constitutional framework within the architecture and configuration of a unitary state within a decentralised form of governance arrangement in three spheres of government” (African National Congress, 2017, p. 44). Underpinning this system of governance is the principle of corporative governance across the different spheres of governance that are distinctive, interrelated and interdependent in their execution of functions. They resolve that, corporative governance legislature to be enacted to address issues relating to (a) the effective support by national and provincial government to local government; (b) the harmonisation of powers and functions between provinces and local government and (c) an accountability framework for provincial and local governments (African National Congress, 2017).

The conference resolutions around local government, reiterate previously held position by the party on restructuring of municipalities. Firstly, they resolve for the governance arrangement of intermediate cities and dense rural areas to be reviewed with the intention of extending the number of category A municipalities. Secondly, the party resolves that district municipalities should continue to exist in certain areas of the country and there should be continued differentiated support of district municipalities in line with their respective powers and functions. Another important call by the ANC is the comprehensive review of the financing and Equitable Share models of support for local government. This is aimed at better aligning the local government resources and their Constitutional mandate and ensuring that municipalities do not operate under unfunded or underfunded environments (African National Congress, 2017).

Section 4 – Methodology

This section is aimed at detailing the statistical methodology used to fulfill the objectives of this study. That is, to determine the impact of the current fiscal decentralisation arrangements on the financial wellbeing of district municipalities and also to determine how district municipalities can improve on their financial conditions under a decentralised operating model. The section will outline the financial condition framework applied. This is followed by introducing the statistical model applied in the study by covering the proposed hypothesis tests, all the variables elected, and the panel data technique chosen to conduct the study.

4.1. Sample Selection

There are eight metropolitan municipalities, 44 district municipalities and a further 205 local municipalities (Alexander & Kane-Berman, 2014). The demarcation changes in 2016 reduced the total number of municipalities from the previous total of 278 municipalities to the current 257 municipalities (Main, 2019). This section we focus on district municipalities, as they are the subject of our study.

The time period of analysis will be over five financial years, that is, between the 2014/2015 financial year to the 2018/2019 financial year. The financial data will be sourced from the National Treasury repository. Supplementary socio-economic data is sourced from Statistics South Africa, the Municipal Demarcation Board and the Centre of Risk Analysis.

4.2. Financial Condition Framework

Financial condition, which can also be known as financial health or wellbeing, can be defined as the ability of an entity to be able to satisfy its obligations with its available resources. Adapting this definition to the public sector, we can define financial condition as the ability of governments to provide public services while satisfying their present and future obligations (Cuadrado-Ballesteros & Bisogno, 2018). The term can be broadly defined as the local government's: (a) ability to finance its services on a continuing basis; (b) ability to meet its obligations as they fall due; and (c) ability to finance the services its constituents require (Turley et al., 2015). This definition of financial condition is closely aligned to the concept of financial sustainability. We understand from Navarro-Galera, Rodríguez-Bolívar, Alcaide-Muñoz, and López-Subires (2016) that financial sustainability can be defined as the ability of government to finance the provision of public services at present without compromising the ability to do so in the future.

The analysis of financial reports provides a key managerial tool for the evaluation of organisational strength and weakness. A framework in assessing the financial health within the public sector, as in the private sector, must rely on accounting data incorporated in financial ratios available from published financial reports (Turley et al., 2015). In measuring the financial condition of municipal governments, Stone (2015) notes that there are no universally accepted standards to measure this. Sohl, Peddle, Thurmaier, Wood and Kuhn (2009) introduce several challenges in assessing the financial position of municipalities. Firstly, there are few generally accepted objective standards to use as benchmarks for financial conditions. Secondly, there is also not a generally accepted methodology to assess a city's relative financial position. The other challenge stems from the difficulty in comparing one local government against another due to differences in population, enrolments or other demographic characteristics.

Stone (2015) in developing a measurement framework towards municipal financial conditions, offers two useful guiding principles. Firstly, non-normative measures should be employed. This means that the variables should be continuous measures of financial health, rather than non-continuous measures which operationalise financial condition as states of shock, stress or crisis. The second principle is that measuring variables should collectively incorporate different dimensions of financial condition. Both short-term and long-term financial conditions should be considered as well as different types of assets and liabilities. Similarly, Gauthier (2007) recommends that the assessment of the financial condition of a local government be made from three-perspectives: firstly, near-term financing – that is the ability for the local government to honour its obligations in a timely manner; secondly, financial position - this is the difference between its total assets and total liabilities; and lastly, economic condition – this perspective considers the likelihood of whether the current financial position will improve or deteriorate in the future.

4.3 Statistical Modelling

4.3.1 Local Government Financial Condition – Explained Variables

The role of financial information in the assessment of financial condition of local governments is critically important as has been asserted in the previous subsection. Stone (2015) in investigating the effects of fiscal decentralisation on the fiscal condition of local government of municipal government in the United States, considered three dimensions of financial condition. That is, cash solvency, budget solvency and long-run solvency. The author excluded the service solvency dimension in their analysis citing that the focus of the paper was meant to consider the financial condition rather than community preferences for local public goods. The particular ratios which then were included in their study include cash ratio, operating ratio, assets to liabilities ratio and unreserved general fund to revenue ratio. In a study looking at measuring the financial performance of local government, Turley et al. (2015) assesses the financial performance of Irish local authorities. The framework used relies on evaluating financial performance using four categories of financial performance and strength. These are short-term liquidity, budgetary solvency, long-run solvency and service development. The associated variables used in the analysis were liquidity, solvency, operational performance, autonomy and collection efficiency.

In the study by Navarro-Galera et al. (2016), which looks at the measuring of financial sustainability and its influential factors in local government in Spain, the paper considers three dimensions of financial sustainability. These are debt, services and revenue. The study further includes 13 financial ratios and indicators from the financial reports that encompass the three dimensions. To account for the revenue dimension, the different sources of revenue were separated to determine how each source of revenue affects financial sustainability - external revenues, internal revenues, capital revenues and operating revenues. The debt dimension was accounted for using long-term debt, short-term debt, commercial debt and financial debt. These variables have been separated to account for source and maturity of debt impacting on financial sustainability. Lastly, the service dimension was represented through government expenditure. That is, the greater the volume to public services provided, the greater the amount of expenditure (staff, infrastructure, etc.). The services measure was accounted for through wages, financial expenditures, capital expenditures and operating expenditures.

In the study by Ritonga (2014), looking to develop a measure of service-level solvency of the local government of Indonesia from an accounting perspective, defines service-level solvency as the capacity of local governments to supply and maintain the level of service its provides to its community. In the study, they measure service-level solvency through two approaches - value of assets per capita and expenditure per capita. In terms of using the value of assets approach, the study argues that the total value of assets owned by the local government informs the accumulated resources to provide services and goods for residents (Ritonga, 2014). The expenditure approach signifies that the magnitude of commitment of the local government to serve its population under the premise that the more expenditure spent by local government, should be followed by more goods and services delivered to residents (Ritonga, 2014). In the context of the local government in South Africa, this study believes that the expenditure approach provides a more suitable approach in measuring the level of services provided as opposed to the value of assets approach. As discussed in the earlier sections, most district municipalities do not make provisions for the vast majority of their statutory obligation while on the other side they may have a significant account of physical non-current assets, such as land, properties and heritage sites. This then can cause a distorted over valuation of services provided by district municipalities in any given year in using the value of assets approach.

The above selected studies represent a much wider literature of measuring and developing a framework for the assessment of financial condition. Consideration has been taken to account for elements of financial performance considered important across the scholarly and government spheres. The framework of this study is adjusted in review of the above literature presented, it is localised to take into consideration the South African fiscal system and application of own judgement on the most relevant variables to be applied for the purposes of this study. The dimensions of financial data considered for our analysis are cash solvency, budget solvency, long-run solvency and service solvency. To this effect the variables used to develop our financial condition framework are – current ratio, operating ratio, debt-asset ratio, operating expenditure per capita:

- Cash Solvency – The capacity of the municipality to create sufficient liquidity to honour financial obligations in the short term;
- Long Run Solvency – The capacity of the municipality to honour its long-run obligations;

- Budget Solvency – The ability of the municipality to generate enough income to its operating expenses without incurring debt; and
- Service Solvency – Considers the quality and volume of services given current policies

The below table 1, presents the financial condition framework which will be used in this paper.

Table 1 : The financial condition framework adopted in the study

Explained Variables		
Measure	**Financial Indicator**	**Calculation**
Liquidity	Current Ratio	Current Asset/Current Liabilities
Solvency	Debt-to-Asset Ratio	Total Liabilities/ Total Assets
Operating Performance	Operating Ratio	(Operating income - operating expenditure)/ Total income
Service Solvency	Operating Expenditure per Capita	Total Operating Expenditure/ Population Size

4.3.2 Local Government Financial Condition – Explanatory Variables

Stone (2015) points out that decentralisation is almost always operationalised in literature as the local government's share of fiscal activities to the state. Using the methodology cited by Stone (2015) to measure for fiscal decentralisation, we will employ three major measures adjusted to the South African decentralised system, which are:

- Decentralisation of own resources – represented by ratio of district revenues to provincial government revenues;
- Decentralisation of direct expenditure – represented by ratio of district expenditures to provincial government expenditures; and
- Decentralisation of long-term debt issued – represented by ratio of district long-term debt to provincial government long-term debt

In their study Ebel and Yilmaz (2002) concede that it is widely accepted that local government's share of total government spending or revenue is an imperfect measure of fiscal decentralisation, as it masquerades details about the design of a fiscal system. They further argue that this aggregation of subnational revenue and expenditure has "little relevance in the decentralization context because the data fail to address properly the intergovernmental fiscal structure of countries and ignore the degree of central government control over local tax rates and tax bases" (Ebel & Yilmaz, 2002, p. 7). To overcome this challenge, they advocate for the total subnational revenue to be divided by the source of the funds – that is, local revenue being divided into tax revenue, non-tax revenue and intergovernmental transfers.

Taking these insights into consideration on our model, the revenue dimension will be split to represent both the source of the funds and the autonomy local government has on them in accordance to the study by Ebel and Yilmaz (2002). The revenue district municipalities are able to self-generate are directly linked on the services they provide. As previously mentioned, district municipalities are unable to generate income from property rates and electricity charges. This leaves municipalities primarily being left to generate own resources mainly from the provision of water and sanitation services. To account for this, the revenue dimension will be separated into three parts:

- District own revenue – This refers to all district self-generated revenue. This is mainly comprised of revenue from the provision of services, investment income, rental income and public donations;
- Primary intergovernmental transfers – This category refers to the sum RSC replacement transfers and Equitable Share Transfers. These two transfers equate to the largest share of the total operational transfers to district municipalities; and
- Secondary intergovernmental transfers – This section will account for any other smaller operational transfers and all capital transfers received by municipalities.

4.3.2.1 Fiscal Decentralisation - Explanatory Variables – Control Variables

Average Annual per capital Household Income

Socio-economic factors which are often not reflected in financial information prove to have a bearing on the financial well-being of local governments (Navarro-Galera et al., 2016; Turley et al., 2015). Based on evidence and insights from previous studies and how local governments are designed to function, household income and population sizes of communities have shown to have an impact on the financial outcomes of local governments. In our study, to control for these two socio-economic variables, we will include average annual per capita income of households.

Senior Municipal Management

The National Treasury (2018) in line with Section 5 of the Municipal Finance Act, produces the State of Local Government and Financial Management Report as part of their supervisory responsibilities for municipal financial management. The report considers both the revenue and expenditure as well as municipal governance related issues in order to identify areas of systematic risk and municipalities that are in financial distress.

The 2018 report in addressing non-financial issues which affect the financial health of municipalities, highlights concerns relating to the instability of senior municipal management positions. The report points out that this has a negative bearing on the provision of public services spurning from the inability to both make basic managerial decisions and appointment of service providers and overall financial instability (National Treasury, 2018). The positions of Municipal Manager (MM) and the Chief Financial Officer (CFO) are critical to the structure and functioning of municipalities. The MM is referred to as the accounting officer of the municipality, responsible for all major operations and holds overall accountability for the administration of the municipality. The CFO is responsible for managing the “Budget and Treasury Office, overseeing the municipality’s finances and ensuring compliance with public finance legislation and council policies” (National Treasury, 2018, p. 28).

To account for this in our model, we will create a dummy variable to account for the permanent filling of these positions in municipalities. That is, if the roles of the MM and the CFO are both permanently filled, we will equate the variable to 1, otherwise the value will be 0. The below table 2, presents the explanatory variables to be used in the study.

Table 2 : The explanatory variables used for the study

Explanatory Variables			
Measure	**Descriptor**	**Definition**	**Calculation**
District own Revenue	DOR	District Revenue that is self-generated	District own revenue/Total District revenue
Primary Intergovernmental Transfer	PIT	Core Intergovernmental transfers to districts	(RSC t+ Equitable Share Transfers)/Total District revenue
Secondary Intergovernmental Transfer	SIT	Any other intergovernmental transfers to districts	Residual transfers/Total District revenue
Total District Expenditure	TDE	Total expenses incurred by the district over provincial expenditure	District expenditures/Provincial expenditures
Total District Debt	TDD	Total debt by the District over provincial debt	District debt/Provincial debt
Household District Income per capita	DIC	Average income from household per district income	Total Household Income/ District Population
Senior Management Occupancy	SMO	Permanent Occupancy of Senior Positions	Dummy Variable of Occupancy of Senior Positions

4.3.3 Panel Data Techniques

Panel data analysis techniques, as explained by Yaffee (2003), encompasses regression analysis with both spatial and temporal dimensions. The spatial dimension refers to a set of cross-sectional units of observation, while the temporal dimension pertains to the periodic observations of a set of variables. Associated benefits from the use of panel data technique include the ability to compensate for the lack of availability in depth of time-series data, which allows for increased degrees of freedom and the potential to lower the standard errors of the estimated coefficients of the regression outputs (de Jager, 2008). Yaffee (2003, p. 4), finds that there are two main benefits to the use panel data analysis – “the ability to study dynamic relationships and to model the differences, or heterogeneity, among subjects”.

Commonly used panel analytical models include the constant coefficients model, also referred to as the pooled model, the fixed effects model and the random effects model. There are various other variations to these models to account for various diagnostics associated with the models (Yaffee, 2003). Baltagi (2005) denotes a two-way error component panel regression model with the below vector notation as:

$$Y_{it} = \alpha + X'_{it}\beta + \mu_i + \lambda_t + v_{it} \qquad (i = 1, \dots, N; t = 1, \dots, T)$$

where,

μ_i = denotes the unobservable individual effect
λ_t = denotes the unobservable time effect
v_{it} = denotes the stochastic error term

The unobservable individual effect is time invariant and it accounts for any individual specific effects that is not included in the regression model. The unobservable time effect is individual invariant and accounts for any time specific effect not reflected by the model. Any other disturbance note reflected within the regression will be captured by the usual stochastic error term (Baltagi, 2005).

The fixed effects and the random effects models are premised upon contrasting assumptions. Under the fixed effects model, μ_i and λ_t are assumed to be fixed parameters to be estimated. The stochastic error term is independent and identically distributed, v_{it} ~IDD (0, $\sigma^2{}_v$). Furthermore, the exogenous variables X_{it} are assumed independent of the v_{it} for all *i* and *t* (Baltagi, 2005). Assumptions of the two-way random effects model are that μ_i ~IDD (0, $\sigma^2{}_\mu$), λ_t ~IDD (0, $\sigma^2{}_\lambda$) and v_{it} ~IDD (0, $\sigma^2{}_v$). Additionally, the X_{it} are assumed independent of μ_i, λ_t and v_{it} for all *i* and *t* (Baltagi, 2005).

Baltagi (2005) finds that the fixed effects model is an appropriate model choice when the focus and basis of inference is on a finite set, of N, panels or individuals. de Jager (2008) adds that the fixed effects model is a more appropriate specification form for most accounting related research. While the random effects model is a suitable specification form in situations where a sample of N panels is being drawn from a large population (Baltagi, 2005). Based on these deductions, our study will use a fixed effects model approach to conduct our analysis.

The steps in conducting our panel regression modelling follows commonly used procedure from academic literature and statistical textbooks. The first step would be to run a pooled panel regression model. The pooled model assumes that there is neither any significant individual nor time effect. That is, the model assumes a constant coefficient for both the intercept and the slope (Yaffee, 2003). This is followed by a pooling or heterogeneity test. This is indeed to test the assumptions from the pooled model, of a common intercept are correct or not. The F-Test is conducted in this regard. The third step is to test for individual and time effects within the model. The subsequent step would be to run the fixed model taking into considerations the results of the previous tests. The following steps entail diagnostic tests for heteroscedasticity and serial correlation. The test for serial-correlation is done using the Durbin-Watson Panel Test. The presence of serial-correlation within the models will be corrected by applying the Prais-Winston transformation. In terms of testing for heteroscedasticity, the test will be done using the Breusch-Pagan Test. To correct for heteroscedasticity, we will apply the White two-way cluster-robust standard errors approach.

4.3.4 Hypothesis Testing

Developing our hypothesis testing model, Stone (2015) summarises two opposing schools of thought on the expected impact of fiscal decentralisation on operations and financial impact to local governments. According to the traditional fiscal federalism theories, local governments are better able than central governments to match local preferences of public goods with their provision, given their proximity to their constituencies. The ability to be able to allocate public resources efficiently allows for local governments to be able to improve its financial condition. The alternate view, as presented under the second generation theory of fiscal decentralisation suggests that decentralisation result in central governments overburdening local government with unfunded mandates in addition to creating perverse incentives for public officials to mismanage local funds which bring about financial distress (Oates, 2008; Stone, 2015).

From these views we build our null hypothesis as that fiscal decentralisation will have no effect on the financial condition of district municipalities. The alternative hypothesis follows that, fiscal decentralisation results in stronger financial condition of district municipalities or fiscal decentralisation results in weaker financial condition of district municipalities.

- H_0 : Fiscal Decentralisation has no impact on the Financial Condition of District Municipalities
- H_1 : Fiscal Decentralisation has an impact on the Financial Condition on District Municipalities

The panel regression model for each of the four financial condition dimensions can be shown as:

$$FC_{i,t} = \beta_{i,0} + \beta_{i,1}DOR_{\ t} + \beta_{i,2}PIT_{\ t} + \beta_{i,3}SIT_{\ t} + \beta_{i,4}TDE_{\ t} + \beta_{i,5}TDD_{\ t} + \beta_{i,6}DIC_t + \beta_{i,7}SMO_t + \mu_i + \lambda_t + v_{\ i,t}$$

where:

FC_{1t}= Financial Condition dimension 1, in year t - liquidity measure

FC_{2t}= Financial Condition dimension 2, in year t – solvency measure

FC_{3t}= Financial Condition dimension 3, in year t – operating performance measure

FC_{4t}= Financial Condition dimension 4, in year t – service capacity measure

$DOR_{\ t}$ = District Own Revenue, in year t

$PIT_{\ t}$ = Primary Intergovernmental Transfer, in year t

$SIT_{\ t}$ = Secondary Intergovernmental Transfer, in year t

$TDE_{\ t}$ = Total Direct Expenditure/Provincial Expenditure, in year t

$TDD_{\ t}$ = Total District Debt/ Total Provincial Debt, in year t

DIC_t = Household District Income per Capita, in year t

SMO_t= Household District Income per Capita dummy, in year t

where 1 = both the MM and CFO roles are permanently filled

where 0 =otherwise

μ_i = denotes the unobservable individual effect

λ_i = denotes the unobservable time effect

$v_{\ i,t}$ = Random error term, in year t

Section 5 – Results and Discussion

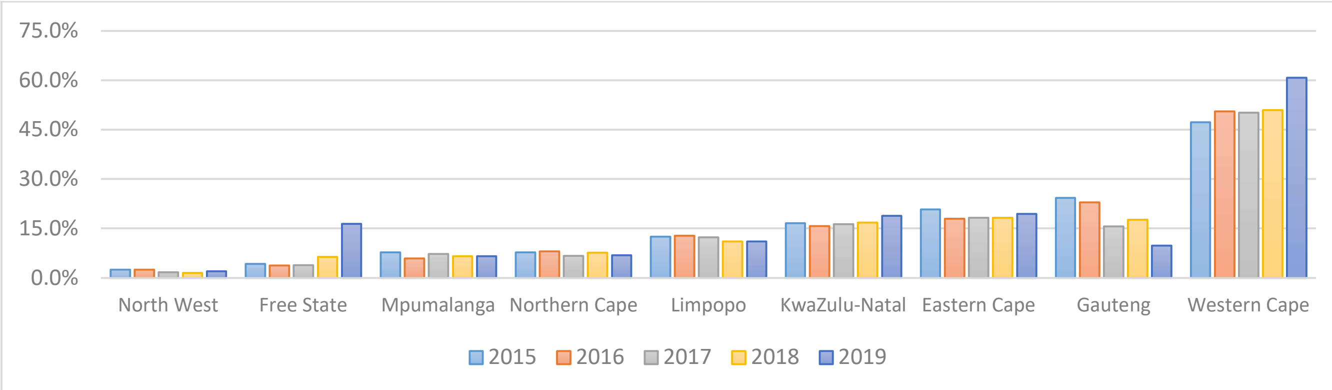
The objective of this section is to present the findings of this study. It first provides a summary of the pattern of fiscal decentralisation over the period of analysis. This is the followed by the presentation of the results of the study by detailing the battery of statistical tests covered in the study to ensure statistical rigour of the used models. The last part provides discussion into the results to provide meaningful insights towards fulfilling the outlined objectives of this paper.

5.1. Fiscal Decentralisation Patterns

The level of devolution of fiscal resources in local government allows to better understand the pattern of decentralisation in a country. The below discussion presents the trends and patterns in revenue generation capacities and intergovernmental transfer dependencies of district municipalities in South Africa.

The results presented in the below figure 4 represents the average percentage of own revenue generated by district municipalities per province between the periods of 2015 and 2019 financial years. The figure shows that the North-West district municipalities generate the least amount of own revenue, while the Western Cape district municipalities generate the largest amount of own revenue. Except for the Western Cape districts, none of the other provinces across the country were able to self-generate at least a third of their total revenue. This follows that these district municipalities rely more severely on government transfers as their primary source of revenue. Figure 4 further shows that district municipalities in richer provinces such as Gauteng and Western Cape generate a relatively higher proportion of own revenue relative to the other provinces. Limpopo, KwaZulu-Natal and Eastern Cape, where there is a concentration of C2 district municipalities are able to generate a higher proportion of own revenue as compared to provinces composed mainly C1 district municipalities, such as the Free-State, Mpumalanga and the Northern Cape.

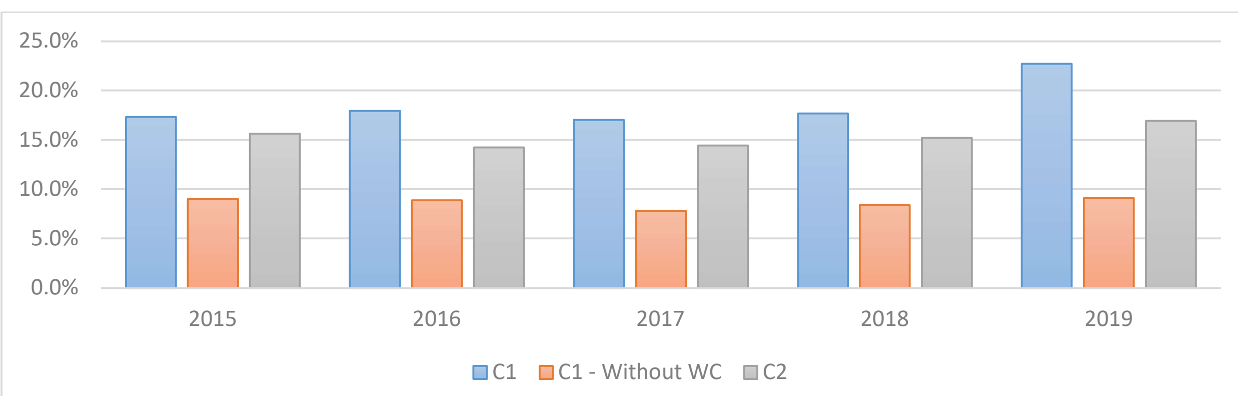
Figure 4 : Average Annual District Own Revenue Percentage per Province



Note: Own calculations from the Audited Financial Statements

Revenue generation patterns can also be viewed is relation to the functions and powers of district municipalities. Figure 5 below shows the average annual own revenue generated based on MIIF Classification, where C1 district municipalities represent those which do not provide water services while C2 district municipalities are providers of water and sanitation functions. Given that district municipalities in the Western Cape were able to self-generate a significant amount of their total revenue relate to other parts of the country, as seen in figure 4, we added an additional data set to compare the average annual own revenue of district municipalities excluding those from the Western Cape.

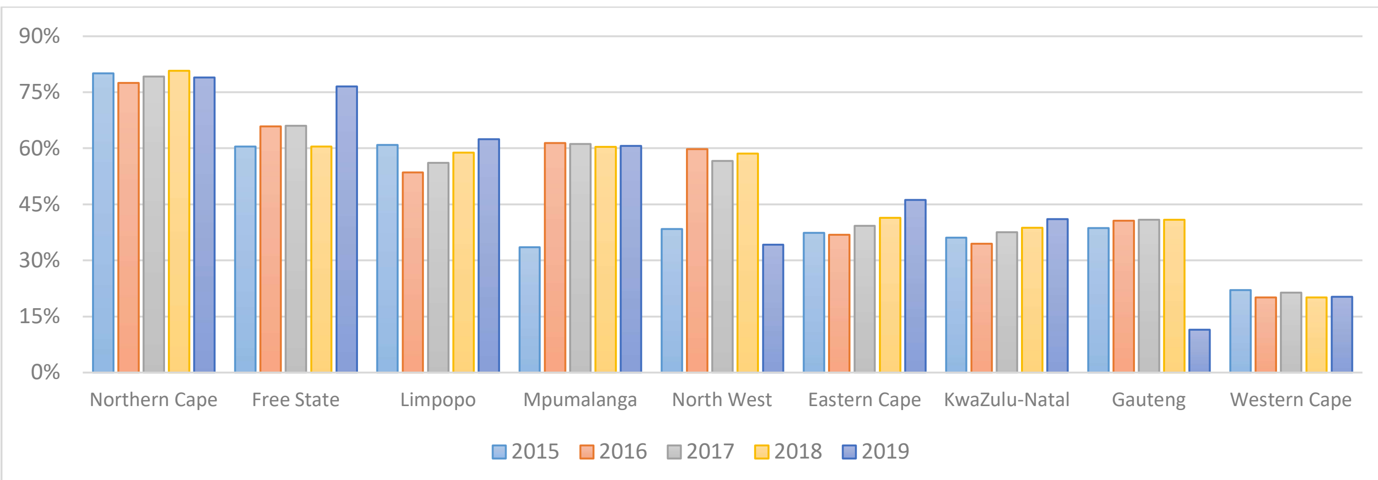
Figure 5: Average Annual Own Revenue by MIIF Classification



Note: Own calculations from the Audited Financial Statements

The results in figure 5 show that C1 municipalities across the country generate just above 15% of their total revenue. However, excluding those in the Western Cape, C1 municipalities are only able to self-generate less than 10% of their total revenues. District municipalities which provide for water and sanitation are able to self-generate slightly more income from the provision of these services. This further support the notion that district municipalities with reduced or limited service responsibilities have a higher dependency on government transfers. The high dependency of district municipalities on intergovernmental transfers is further supported by the results shown in the figure 6 below. The figure shows the average allocation of equitable share grant received by district municipalities per province.

Figure 6: Average Equitable Share Allocation per Province



Note: Own calculations from the Audited Financial Statements

Local governments are entitled to equitable share of nationally raised revenue as prescribed in term of section 227 of the Constitution. It is an unconditional grant provided to municipalities to supplement the revenue municipalities are able to generate on their own (National Treasury, 2016). It allows for municipalities to "deliver free basic services to poor households and subsidises the cost of administration and other core services for those municipalities that have the least potential to cover these costs from their own revenues" (National Treasury, 2016, p. 2). The allocation of equitable revenue is based on a formula made up of three components, that is:

- the basic services component – provides for the cost of free basic services;

- municipal capacity component – this relates to subsidising municipal administrative cost, support for other municipal services outside of basic services; and
- stabilisation component – this provides for the stability and predictability of revenue

As can be seen in the above figure, equitable share grants account to a significant portion of the total revenue of district municipalities. Provinces which are relatively poorer and those in which the district municipalities provide a limited amount of functions, the equitable share transfer represents the largest source of revenue.

5.2. Empirical Results

Making correct inferences based on fitted statistical models require that the features of the data be in congruence with the model assumptions. Various diagnostic techniques are available to researchers to be able to examine these congruencies. The discovery about model inadequacies allow us to improve on the model specifications, tests and procedures (Frees, 2004). The rest of this section follows this process of developing regression models which are progressively improved upon through testing numerous assumption which underpin them.

5.2.1 Pooled Regression Model

To conduct our analysis, we will initially develop a pooled panel regression model. The pooled regression model provides a primary building block towards our analysis. The pooled model is based on the assumption that the data does not present any significant individual or temporal effects (Yaffee, 2003). In our study, this assumption would mean that there is no heterogeneity between the different district municipalities and also across different time periods. Under this assumption, the data is then pooled and we run an ordinary least square regression model to estimate the model (Yaffee, 2003). The results of the pooled regression models are presented below in table 3.

The results from the pooled models reveal a relatively low explanatory ability across the three models, excluding the model for the service solvency. The adjusted R-Squared values for the three models are under 0.35. That is, the variations in the explanatory variables are only able explain under 35% of the variation of the dependent variable. The adjusted R-Squared of the service solvency model is much higher at 0.65. The F-Statistic provides a formal test for the overall fit of the model, where the null hypothesis is that the explanatory coefficients are simultaneously equal to zero. The associated p-value allows us to make inferences about the test results. The p-value conveys the probability of falsely rejecting the null hypothesis (Miller, 2008). Being a probability, it takes the values between 0 and 1. The smaller the p-value becomes, that implies that there is increasingly strong evidence to reject the null hypothesis (Dahiru, 2008). We will use the standard convention of the p-value being less than 0.05, for concluding that there is strength of statistical evidence against the null hypothesis.

The associated p-value of the F-test are less than 0.01, which means we reject the null hypothesis of the coefficients of explanatory variables simultaneously equalling to zero. The values Durbin-Watson Statistics across are the model, except for the budget solvency model are all less than 0.5. This indicates that these models suffer from positive serial correlation. A Durbin-Watson statistic close to 0 is indicative of positive serial correlation, while when it is closer to four, it points to negative serial correlation. When the Durbin-Watson statistic is approximately 2, it points to the model having no serial correlation (Studenmund, 2014).

Table 3 : Results of the pooled panel regression model

	Cash Solvency			Long Run Solvency			Budget Solvency			Service Solvency		
	Coefficient	SE	P > |t|	Coefficient	SE	P > |t|	Coefficient	SE	P > |t|	Coefficient	SE	P > |t|
Constant	46.17	52.68	0.38	-7.74	8.38	0.36	6.53	2.85	0.02*	-6414.10	4281.37	0.14
District own Revenue	-39.12	52.13	0.45	4.22	8.29	0.61	-6.72	2.82	0.02*	7750.40	4236.80	0.07
Primary Intergovernmental Transfer	-41.69	52.23	0.43	4.97	8.30	0.55	-6.82	2.82	0.02*	6741.91	4244.74	0.11
Secondary Intergovernmental Transfer	-49.61	52.28	0.34	4.61	8.31	0.58	-7.02	2.83	0.01**	7859.39	4249.18	0.07
District Debt Issued	-0.01	0.01	0.23	0.00	0.00	0.56	0.00	0.00	0.01**	0.82	0.46	0.08
Total District Expenses	0.54	0.27	0.05*	-0.19	0.04	0.00**	-0.04	0.01	0.01**	147.22	21.99	0.00**
Log of Household District Income per capita	-0.16	0.43	0.71	0.36	0.07	0.00**	0.03	0.02	0.24	-30.38	34.79	0.38
Senior Management Occupancy	0.82	0.43	0.06	-0.02	0.07	0.76	0.00	0.02	0.93	-11.81	34.90	0.74
Number of Observations	210.00			210.00			210.00			210.00		
R-squared	0.26			0.33			0.24			0.66		
Adjusted R-Squared	0.24			0.31			0.21			0.65		
F-statistic	10.18			14.51			9.04			56.45		
Prob(F-statistic)	0.00			0.00			0.00			0.00		
Akaike Info Criterion	4.94			1.26			-0.89			13.74		
Durbin-Watson Statistic	0.28			0.42			1.33			0.49		

Note: The table above represents five years of data for the 44 district municipalities, during the periods of 2015 to 2019.
*indicates significance at 5% level
** indicates significance at a 1% level

5.2.2. Heterogeneity Test

The following step in our analysis is to test the underlying assumption of our primary pooled model. That is, to test whether our panel data has a common slope and a common intercept across time and across the different district municipalities. According to Frees (2004), the pooling test can also be referred to as a test for heterogeneity and it an important first procedure to justify the need for individual and time specific effects. The failure to include to model heterogeneity into the model may introduce serious bias into the model, which is referred to as heterogeneity bias (Frees, 2004).

To setup the pooling test, we will use an F-test, where the null hypothesis is that there is homogeneity and the alternative hypothesis is that the data is heterogeneous. This can be represented as follows:

- H_0 : There is homogeneity
- H_1 : There is heterogeneity

Table 4: Results of the Heterogeneity Test

	Heterogeneity Test			
	Cash Solvency	Long Run Solvency	Budget Solvency	Service Solvency
F Statistic	38.42	12.32	2.43	20.30
P-value	0.00	0.00	0.00	0.00

For inference of the results, we will use the associated values of the p-value presented in table 4. The above p-values are all less than 0.01 across all the models. These results provide strong statistical significance to reject the null hypothesis of a common slope and a common intercept across the different district municipalities and over time. This therefore means that the data should not be pooled for regression purposes and inference (de Jager, 2008).

5.2.3. Fixed Effects Tests

Following from the previous results, we will then test the validity of the cross-sectional fixed effects as well as the time fixed effects. We will conduct three different F-statistic tests, these are fixed individual effect, the fixed time effects and the joint individual and time effects.

Table 5 : Results of the Cross-Section Fixed Effects Test

	Cross-Section Fixed Effects Test			
	Cash Solvency	Long Run Solvency	Budget Solvency	Service Solvency
Cross-section F - Statistic	38.56	13.15	2.62	22.26
P-Value	0.00	0.00	0.00	0.00

The first test relates to testing the validity of cross-sectional effects. The null hypothesis is that the cross-sectional fixed effects are not valid, while the alternative hypothesis provides for the validity of cross-sectional effects. The results for the F-test are provided in table 5 above. The associated p-values across the four models are all less than 0.01. From this, there is strong statistical evidence that we can reject the null hypothesis and infer that the cross-sectional fixed effects are statistically valid.

Table 6 : Results of the Time Fixed Effects Test

	Period Fixed Effects Test			
	Cash Solvency	Long Run Solvency	Budget Solvency	Service Solvency
Period F - Statistic	1.07	3.11	2.65	6.18
P-Value	0.38	0.02	0.04	0.00

Table 6 provides test outcomes for the validity of the time fixed effects. Under the null hypothesis, the time-effects are not valid while under the alternative hypothesis, the time fixed effects are given as being valid. The cash solvency model has an associated p-value which is greater than 0.05, while the other models have reported p-values of less than 0.05. For the cash solvency model, we do not reject the null hypothesis, meaning the fixed time effects are not valid. For the other three models, with a p-value less than 0.05, we reject the null hypothesis and conclude that the fixed time effects are valid.

Table 7 : Results of the joint Cross Section and Time Fixed Effects Test

	Joint Cross Section and Time Fixed Effects Test			
	Cash Solvency	Long Run Solvency	Budget Solvency	Service Solvency
Cross-Section/Period F - Statistic	35.30	12.14	2.54	21.51
P-Value	0.00	0.00	0.00	0.00

Lastly, we test the joint fixed cross sectional and time effects validity in the model. The null hypothesis for the test is that the cross sectional and time effects are not jointly valid, while the alternative hypothesis is that the cross sectional and time effects are jointly valid. The results are provided in the above table 7. Across all the four models, the associated p-values are less than 0.01, providing strong statistical significance to reject the null hypothesis. This means that the individual effects and time effects are jointly valid. The above results provide sufficient support for heterogeneity both across panels and over time. Based on this, the following step entails running a two-way fixed effects model. The results of this model are presented below in table 8.

The output of the regression model of the two-way fixed model is significantly different from that of pooled model presented in the above table 3. Firstly, there is a significant increase in the values of the adjusted R-squares across all the models, where all the values are greater than 0.6. For the cash, long-run and services solvency models, the adjusted R-squared values are significantly much higher at 0.91, 0.81 and 0.96 respectively. This shows that accounting for heterogeneity across the district municipalities and over time, the variations in the explanatory variables are better able to explain the variations in the dependent variables. As explained by de Jager (2008), controlling for heterogeneity may prevent the model from suffering from an omitted variable bias. The associated p-value of the F-Statistic is less than 0.01 across all the four models. We thus reject the null hypothesis of the explanatory coefficients being simultaneously equal to zero. The estimated coefficients between the two models are also materially different. The most notable difference being the estimated coefficients of the two-way fixed model of the budget solvency are largely no longer statistically significant as compared to the pooled regression model. Secondly, there is notable changes in the values of the Durbin–Watson statistics between the two modelling techniques. The Durbin-Watson values for the cash, long-run and services solvency model are now closer to the value of 2.

Table 8: Results of the two-way error component fixed panel regression model

	Cash Solvency			Long Run Solvency			Budget Solvency			Service Solvency		
	Coefficient	SE	P > |t|	Coefficient	SE	P > |t|	Coefficient	SE	P > |t|	Coefficient	SE	P > |t|
Constant	78.19	63.38	0.22	-26.75	15.93	0.10	-9.59	8.81	0.28	1043.43	6424.03	0.87
District own Revenue	-5.44	20.36	0.79	0.05	5.12	0.99	-1.32	2.83	0.64	537.67	2064.09	0.79
Primary Intergovernmental Transfer	-9.73	20.18	0.63	0.07	5.07	0.99	-1.69	2.81	0.55	532.23	2045.80	0.80
Secondary Intergovernmental Transfer	-7.98	20.46	0.70	0.20	5.14	0.97	-1.66	2.85	0.56	548.83	2074.28	0.79
District Debt Issued	0.00	0.00	0.82	0.00	0.00	0.90	0.00	0.00	0.03*	0.57	0.27	0.04*
Total District Expenses	-0.08	0.22	0.71	0.04	0.06	0.51	-0.13	0.03	0.00**	175.89	22.80	0.00**
Log of Household District Income per capita	-6.52	6.00	0.28	2.63	1.51	0.08	1.10	0.83	0.19	-112.17	607.93	0.85
Senior Management Occupancy	-0.02	0.18	0.91	-0.07	0.05	0.12	-0.03	0.03	0.25	9.54	18.29	0.60
Number of Observations	210.00			210.00			210.00			210.00		
R-squared	0.94			0.86			0.57			0.96		
Adjusted R-Squared	0.91			0.81			0.42			0.94		
F-statistic	42.58			17.33			3.81			60.97		
Prob(F-statistic)	0.00			0.00			0.00			0.00		
Akaike Info Criterion	2.93			0.17			-1.02			12.17		
Durbin-Watson Statistic	2.25			1.60			2.03			2.31		

Note: The table above represents five years of data for the 44 district municipalities, during the periods of 2015 to 2019.
*indicates significance at 5% level
** indicates significance at a 1% level

The following steps in our analysis is to test issues relating to the error terms of the models. That is, we will test the presence of serial correlation and heteroscedasticity in the two-way fixed effects models.

5.2.4. Serial Correlation Test

Serial correlation can be defined as when the residual error terms are correlated over time (de Jager, 2008). According de Jager (2008) and Studenmund (2014) , the presence of serial correlation in the model has significant consequences including resulting in consistent but inefficient estimates and also causing the standard errors of the estimates to be biased leading to unreliable and incorrect inference about the significance of the estimated variables.

The Durbin-Watson test is used to test determine first-order serial correlation in standard linear models can be used to test the presence serial correlation in panel models. As noted by (Baltagi, 2005), the generalised first order serial correlation can be represented by the below:

$$v_{it} = \rho v_{i,t-1} + \varepsilon_{it}$$

where, $-1<\rho<1$ and represents the correlation coefficient and ε_{it} ~IDD (0, $\sigma^2{}_{\varepsilon}$). To test for serial correlation, the null hypothesis is that the model does not present serial correlation, with the alternative hypothesis being that serial correlation is present:

- H_0 : ρ = 0 - There is no serial correlation
- H_1 : $|\rho|$ > 0 - There is serial correlation

Table 9 : Results of the Durbin–Watson Test for Panel Models for Serial Correlation

	Durbin–Watson Test for Panel Models			
	Cash Solvency	Long Run Solvency	Budget Solvency	Service Solvency
Durbin-Watson Statistic	2.20	1.77	2.06	2.28
P-value	0.93	0.06	0.69	0.98

The above table provides a test results for serial correlation using the Durbin-Watson test across the four models. The associated p-values of the tests, across all the models are greater than 0.05.

The results thus show that we cannot reject the null hypothesis for all the models. Therefore, for all the models we can infer that there is no serial correlation.

5.2.5 Heteroscedasticity Test

Heteroscedasticity can be defined as the stochastic error term having a non-constant variance across cross- sections and time. The assumptions of the model are however that the regression disturbances are homoscedastic. Baltagi (2005) and de Jager (2008) note that this assumption is restrictive for panel model given that cross-sectional units may be of different sizes and produce different variations. Heteroscedasticity has similar inference effects as the presence of serial correlation, whereby the standard errors of estimates become biased and inference about the estimated coefficients may be incorrect (de Jager, 2008)

To test the presence of heteroscedasticity within the model, we will use the Breusch-Pagan Test. Under this test, the null hypothesis provides that the model is homoscedastic, while the alternative hypothesis is that there is heteroscedasticity within the model:

- H_0 : There is homoscedasticity
- H_1 : There is heteroscedasticity

Table 10 : Results of the Breusch-Pagan Test for Heteroscedasticity

Breusch-Pagan Test				
	Cash Solvency	Long Run Solvency	Budget Solvency	Service Solvency
Breusch-Pagan Test Statistic	115.46	65.58	34.70	54.04
P-value	0.00	0.00	0.00	0.00

The above table provides for the Breusch-Pagan test for heteroscedasticity across the four models. The associated p-values of the tests show that the all the p-values were less than 0.01. This provides strong statistical significance to reject the null hypothesis. That is, the null hypothesis of homoscedasticity of the error terms is rejected and the alternative of the presence of heteroscedasticity in the error terms is likely to be prevalent. The regression models would thus need to be corrected for heteroscedasticity.

To correct for heteroscedasticity, Frees (2004) points out that a common approach used to correct for this involves computing standard errors that are robust to the homoscedasticity specification.

In our analysis, we will apply White's two-way cluster robust standard errors method to correct for the presence of heteroscedasticity.

The below regression models represented in table 11, provide for the final statistical models for our analysis after going through a battery of statistical tests. The outputs of the models are materially different from the outputs shown in table 3. The explanatory powers of the models have significantly improved across the models, as measured by the adjusted R-squared. Excluding the budget solvency model, the adjusted R-squared for the other three models are all above 0.8. That is, for these three models, the variations in the explanatory variables are able to explain over 80% of the variations in the respective dependent variables. The F-statistics of the regression models are in line with previous other models, in which the null hypothesis is rejected and that the explanatory coefficients are not simultaneously equal to zero. The residuals from final models, as tested in the above section are not serially correlated. To correct for heteroscedasticity, the models were adjusted using White's two-way cluster robust standard errors technique.

The additional material difference which is represented in the outputs of the final regression models is that across the four models, all the estimated coefficients are not statistically significant at a 5% level, except only one. This is the district long term debt issue variable within the service solvency model, whereby the coefficient is positive at a 5% level.

Table 11: Results of the two-way error component fixed panel regression model with the White two-way cluster robust standard error adjustment

	Cash Solvency			Long Run Solvency			Budget Solvency			Service Solvency		
	Coefficient	SE	P > |t|	Coefficient	SE	P > |t|	Coefficient	SE	P > |t|	Coefficient	SE	P > |t|
Constant	78.19	117.06	0.54	-26.75	24.46	0.34	-9.59	10.93	0.43	1043.43	3729.64	0.79
District own Revenue	-5.44	10.80	0.64	0.05	0.83	0.96	-1.32	1.15	0.31	537.67	661.11	0.46
Primary Intergovernmental Transfer	-9.73	9.92	0.38	0.07	0.75	0.93	-1.69	1.28	0.26	532.23	805.88	0.55
Secondary Intergovernmental Transfer	-7.98	11.29	0.52	0.20	0.94	0.84	-1.66	1.46	0.32	548.83	915.46	0.58
District Debt Issued	0.00	0.00	0.69	0.00	0.00	0.81	0.00	0.00	0.07	0.57	0.18	0.03*
Total District Expenses	-0.08	0.16	0.62	0.04	0.02	0.19	-0.13	0.08	0.15	175.89	82.05	0.10
Log of Household District Income per capita	-6.52	11.34	0.60	2.63	2.40	0.33	1.10	0.99	0.33	-112.17	392.15	0.79
Senior Management Occupancy	-0.02	0.02	0.43	-0.07	0.04	0.13	-0.03	0.03	0.42	9.54	12.63	0.49
Number of Observations	210.00			210.00			210.00			210.00		
R-squared	0.94			0.86			0.57			0.96		
Adjusted R-Squared	0.91			0.81			0.42			0.94		
F-statistic	42.58			17.33			3.81			60.97		
Prob(F-statistic)	0.00			0.00			0.00			0.00		
Akaike Info Criterion	2.93			0.17			-1.02			12.17		
Durbin-Watson Statistic	2.25			1.60			2.03			2.31		

Note: The table above represents five years of data for the 44 district municipalities, during the periods of 2015 to 2019.

*indicates significance at 5% level

** indicates significance at a 1% level

5.3 Discussion

Our final panel regression models as presented in table 11, show that the majority of the estimated coefficient across the four models are statistically insignificant. Miller (2008) highlights that a lack of statistical significance in the estimated outputs can be proven to have substantive significance. Substantive significance refers to the real-world relevance of the statistical finding in the context to the specific topic under investigation. There are various reasons which can explain why estimated coefficients are statistically insignificant. These include small sample sizes, large standard errors, the design of the study, the measurement of variables and also the model specifications (Miller, 2008).

Of particular relevance relating to the study of fiscal decentralisation relates to the controversial issue of measurement of variables. As mentioned in the onset of this study, there is a startling diversity of definitions and measures to the concept of decentralisation. This “proliferation of meanings and measures erode precision and impedes the ability to assess types of decentralisation” (Schneider, 2003, p. 32). On the other hand, the proliferation of definitions and measures are in place to account to the wide variety of application of decentralisation globally (Schneider, 2003). The measures of fiscal decentralisation in literature differ based on the geographical location of interest, the objective of the study and the type of data being used in the study. Ebel and Yilmaz (2002) further emphasise the importance of choosing the correct fiscal decentralisation variables by noting that the estimated outputs are sensitive to variable selection and any choice made in the design process can have a significant bearing in the results. These varying measures of are also evident in various studies of fiscal decentralisation referenced in this study including Gauthier (2007), Stone (2015) and Turley et al., (2015).

The primary purpose of this study involved testing the two opposing schools of thought around the impact of fiscal decentralisation on the financial wellbeing of district municipalities in South Africa. Based on the final regression results presented in table 11, we cannot reject the stated null hypothesis of this study. Put differently, the results show that there is no statistical evidence to show that fiscal decentralisation arrangements of district municipalities in South Africa have any significant positive nor negative impact on their financial wellbeing. What we can infer from this is that the myriad of other challenges within local government, which have been presented in the previous sections, have a much greater impact on the overall financial condition of district municipalities.

In reaching to the above conclusion, it is important to mention these supporting findings as they have a direct bearing to the overall outcomes of this study. Ebel and Yilmaz (2002), referencing the decentralisation theorem, point out that local governments are best placed to be able to adjust their budgets in line with local preferences to offer a basket of public services most efficiently. To implement this, local governments must be given the authority to procure own sources of revenue. The paper notes that this is the essence of decentralisation (Ebel & Yilmaz, 2002). We argue, on this basis, that the level of fiscal decentralisation of local governments has a bearing on the impact that fiscal arrangements can have on local government finances. The revenue structures of local governments provide a meaningful measure of the level of decentralisation. As presented in figure 1 to figure 3 in the previous section, district municipalities in South Africa are only able to self-generate very low levels of revenue and they have a significant dependency on intergovernmental transfers to supplement their total revenue. In contrast, in the study by Stone (2015), the average own sources of revenue by local governments were around 76%, reflecting how fiscally decentralised the municipalities in the study were. It is on these substantive findings we can infer that district municipalities in South Africa are actually not much fiscally decentralised, but are actually still fiscally centralised.

Stanton (2009) notes that literature equates fiscal decentralisation to financial autonomy, and this implies self-sufficiency of local levels of government. In South Africa however, fiscal autonomy is limited due to the nature of fiscal policymaking, fiscal transfers and their attached conditions. This arrangement has characteristics of a deconcentration form of fiscal decentralisation, as opposed to devolution as envisioned by the Constitution (Stanton, 2009). Fiscal devolution in South Africa is however not straightforward due to the continuing legacies of unequal development, inequitable access to revenue sources, administrative and financial weaknesses. These prevailing factors thus require fiscal decentralisation arrangements in South Africa need to further focus on redressing financial disparities amongst municipalities beyond just devolution of fiscal resources (Stanton, 2009).

It is from these positions, we argue that given the largely low levels of fiscal decentralisation in district municipalities, that the impact of impact of fiscal decentralisation on their financial conditions is insignificant.

For district municipalities to fulfil their founding principles of developmentalism and decentralisation, there requires a legal framework restructuring in the manner they currently function and are designed. Steytler and Jordan (2005, p. 5) articulate that there needs to be a clarification on the powers and functions of district municipalities and further add that this “should be accompanied by a policy clarification on the overall function of district municipalities. The ambiguous position of districts, where some are services providers and others are coordinators, is not conducive to sound government within provinces”. Furthermore, the intergovernmental fiscal system must ensure that municipalities receive the requisite and necessary fiscal powers and authority to perform their allocated Constitutional mandate (Stanton, 2009).

Section 6: Conclusion and Recommendations

6.1 Summary and Conclusion

In South Africa, decentralisation was an essential component of its transition from apartheid towards democratic governance (Faguet, 2011). Siddle and Koelble (2016) remark that the two founding principal characteristics of the South African local government are developmentalism and decentralisation, as both these aspects feature clearly in the South African Constitution.

The theoretical framework of this study focused on two contrasting schools of thought on the impacts of fiscal decentralisation on the financial condition of district municipalities in South Africa. The first theoretical position stems from the traditional fiscal federalism literature which posits that, a decentralised system of governance can more efficiently meet the needs of citizens towards the provision of public services. This structure further allows for greater accountability to local citizens which can lead to improved financial conditions of local governments (Stone, 2015). The second-generation theorists of fiscal federalism argue a contrasting view. The literature of this view suggests that fiscally decentralised systems can create perverse incentives to public officials to act in manners that are not financially prudent and harm social welfare. In this instance, fiscal decentralisation can produce weaker financial conditions of local governments (Oates, 2008; Stone, 2015).

On the backdrop of these theoretical positions, the primary objective of this study looked to investigate the impact of fiscal decentralisation, if any, of the financial wellbeing of district municipalities in South Africa. To conduct this study, we used financial data from the 44 district municipalities between the 2015 and 2019 financial years. The study employed the two-way error component panel regression technique, applied across the four determining levers of financial condition which are – liquidity, solvency, operating performance and service solvency.

The final regression models went through a battery of test for any model inadequacies. The results from the four regression models, though all showing relatively high adjusted R-squared values, an overwhelming majority of the estimated coefficients were statistically insignificant. From these results, we can infer that the fiscal decentralisation arrangements have no significant bearing on the financial well-being in district municipalities in South Africa. We further presented a caveat of the plausible reason for this - which is the low level of fiscal decentralisation of district municipalities in South Africa. Looking back at the definition of fiscal decentralisation by Porcelli (2009), it is a two-dimensional policy which entails tax instruments authority by local government and decentralisation of expenditure when local governments take up the responsibility of implementing expenditure functions. Based on this, we see that districts do not meet any of the set-out criteria as per the definition. They have limited access to generate revenue through imposing taxes to citizens and they have reduced expenditure commitments given limited service delivery functions they currently fulfil. District municipalities in South Africa only have the capacity to self-generate a small portion of their overall revenue, which in part is due to the majority of them not fulfilling their full suite of statutory functions (Joseph, 2012). This has resulted in district municipalities becoming excessively reliant on transfers from national government to supplement their revenue stream. As Stanton (2009) puts it, the intergovernmental fiscal system in South Africa is highly centralised whereby characteristics of deconcentration as opposed to devolution are prevalent.

In the current design within local government, district municipalities form a critical part of national policy towards building an inclusive and integrated rural economy across the country. Their well-functioning is important in terms of providing basic social services and infrastructure in many rural communities. Given the myriad of challenges faced by local governments in the country, specifically relating to the two-tier system of governance, there have been ongoing calls towards the review and the restructuring of this tier of government from various stakeholders, including the governing party, the ANC and from academia (African National Congress, 2017; Community Law Centre, 2008).

The promise and the wide adoption of the practise of decentralisation across the world has been to strengthen democratic governance and the provision of services (Ribot, 2002). Good governance necessitates empowering local municipalities with authority, resources and building their capacity to function as participatory institutions that are responsive and accountable to the concerns and needs of all its residents (Mugabi, 2005). The poor functioning of local governments can have dire consequences to the living conditions and economic prospects of any community. In a recent example, the dairy food and beverage company Clover South Africa announced its plans to close their operations in the town of Lichtenburg, under the Ditsobotla local municipality. The company indicated concerns around the provision of services which included poor road infrastructure and unreliable supply of water and electricity which have resulted in increased operating costs and has adversely affected their suppliers. The company employs over 400 people while creating additional employment opportunities through subcontracting (Patrick, 2021). The planned closure of this plant represents the risk significant devastation to people's jobs and livelihood in the community of Lichtenburg as a result of the failings of the local government.

The findings in this study are important and relevant to this ongoing discourse as they reveal that the current legal and operational frameworks of district municipalities are not fiscally efficient under the tenets of fiscal decentralisation. The paper also revealed that given the highly centralised fiscal arrangements, district municipalities have limited fiscal autonomy which makes them merely basic service providers in some cases, as opposed to basic service authorities (Stanton, 2009). These findings should provide useful inputs towards policy thinking and design on the restructuring of the two-tier system of governance of district municipalities and more broadly the local government in South Africa. A well-considered fiscal decentralisation framework for South African municipalities presents a daunting challenge for policy makers. It should enhance local autonomy, promote political accountability, be underpinned by a self-sufficient financing mechanism while also being able to address past legacies structural inequalities and administrative weaknesses (Ebel & Yilmaz, 2003; Stanton, 2009).

6.2 Recommendations for further research

The study of local governance, its legal framework, its operating mechanism, the interactions with political agents and how all these various structures interact together towards the primary objective of improving the social welfare of its citizens is quite vast and complex. These complexities have been quite evident in this study. Following from this study there are some suggestions for further research within this field of study. Firstly, and of foremost interest in the area of government decentralisation is the need to develop a more consolidated and universal measures of fiscal decentralisation. The need for developing generally accepted measures of fiscal decentralisation will help to better understand the mechanisms and impacts of decentralisation which can assist in developing robust policies around the topic. Secondly, within the South African context, this current study can be extended to investigate the impact of fiscal decentralisation on the financial position of metropolitan municipalities. Metropolitan municipalities have greater fiscal autonomy and a larger revenue base as compared to district municipalities. That is, metropolitan municipalities are the most fiscally decentralised of the three categories of municipalities. Lastly, relating to policy design, we advocate for a study reviewing the different policy recommendation around the restructuring of local government presented by various stakeholder. Of particular interest is to analyse the impact of these proposals on the fiscal implications and sustainability for the associated municipal categories.

6.3 Limitations of the study

In this subsection we review some of the limitation to be taken into consideration in review of this study. There are two main elements which we highlight as limitation in this study. These relate to the area of measurement of both the dependent and independent variables used in the study, while the other relates to the statistical regression technique adopted. As previously mentioned, the measurement frameworks of both fiscal decentralisation and financial conditions are not universally accepted standards and there are few generally accepted objective standard to measure each, given the varied definitions and applications of both these fields of study. This means that any measurement approach taken can have a significant impact on the calculations of the variable, the overall results and subsequently the inference to be drawn from this. Secondly and along the same breath, is the choice of the statistical model to conduct the study. The statistical universe has basket of statistical techniques which can be applied in studies. The choice of the regression technique then, has significant bearing on the estimated output and the inference which can be drawn from them.

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