



Technical Report

Division of Revenue 2020/21:

Repositioning Local Government Public Finances

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Executive summary

As the sphere of government closest to the people, the local government (LG) is at the centre of South Africa's socio-economic development agenda. The role of LG is enshrined in Section 152 of the Constitution of South Africa and includes the provision of democratic and accountable government to local communities; provision of basic services in a sustainable manner, promoting local economic development, and encouraging community participation in local government issues. The centrality of LG in the socio-economic development of South Africa was further emphasised in the 1998 White Paper on Local Government and the 2012 National Development Plan (NDP).

It is now close to 25 years since the new LG dispensation and since the white paper was published, and serious questions are being asked on the effectiveness of the sector in fulfilling its mandate as spelt out in the Constitution. Although the sector has significant achievements regarding access to basic services (water, sanitation, electricity, refuse removal), many indicators suggest that the LG sector remains wanting in the fulfillment of its constitutionally assigned mandate. Many municipalities continue to underperform, denying many of their citizens access to basic services.

Governance deficits remain in a significant proportion of municipalities. In a study of all the 257 South African municipalities, COGTA (2018) noted that around one in three municipalities were dysfunctional or distressed, meaning that they were not able to deliver on one or more of their constitutional obligations. The reasons for underperformance are many and varied, including the misalignment between expenditure needs and financing frameworks and misalignments of governance and institutional structures. Over the years, many programmes and interventions (legal, policy, financing, etc.) have been undertaken, but they have largely failed to turn around the sector.

In this 2020/21 Technical Report, the Financial and Fiscal Commission (Commission) reflects on the issues and challenges constraining LG. In particular, the Commission reflects on the performance of the LG fiscal framework; municipal functionality and the efficacy of interventions invoked to improve the performance of municipalities; the effectiveness and efficiency of LG infrastructure management; and the potential of the city region development model.

This Technical Report, under the theme “*Restoring Local Government Public Finances*” served as background to inform the five chapters of the FFC flagship submission: the 2020/21 Annual Submission to the Division of Revenue (FFC, 2019). The 2021/22 Annual Submission reflects the mandated position of the Commission on these issues. Positions taken in the technical report should therefore not be seen as necessarily reflecting the position of the

Commission. Key chapters of this report have been further summarised into policy briefs to reflect key research findings.

The Technical Report is divided into 10 chapters. Chapter one sets the scene, by providing an overview of the LG sphere, focusing on achievements of the sector as well as the continuing challenges. As noted above, the LG sector has experienced significant structural, policy and financial changes since the advent of democracy. The sector has achieved much in terms of governance and access to basic services. Access to basic services has improved, the allocation of resources to LG has increased, and infrastructure spending has gone up substantially. However, the sector is still grappling with persistent challenges in a number of areas, including, among others, poor financial management, low and declining “own revenue” in the majority of municipalities, and inefficient delivery of infrastructure, as well as poor maintenance of existing infrastructure.

Chapter two reviews the LG fiscal framework. The fundamental problem confronting most municipalities is the widening gap between the available financial resources and the delivery of service needs. This Chapter therefore evaluates the feasibility of alternative/supplementary revenue sources to plug this revenue gap. Based on the survey results of 23 municipalities, and content analysis of both modern public finance theory and empirical studies, a list of potential revenue sources for LG was identified and include: the development charges, tourism and fire levies, and amusement and advertisement taxes. These revenue sources rank highly in terms of the five important criteria for a “good” tax handle, i.e. efficiency, accountability, transparency, fairness, and ease of administration.

Chapter three interrogates the issue of tax effort with respect to property rates. This chapter quantifies municipal tax effort and examines constraints to traditional revenue optimisation with a particular focus on property taxes. Using both quantitative and qualitative methods, the chapter confirms that municipalities, especially rural and small towns where inefficiencies are relatively high, are not optimising property tax collection. B3 and B4 municipal categories collect only 40 per cent and 56 per cent of the expected revenues from property rates, respectively. Urban municipalities (metropolitan municipalities, secondary cities and large towns) were found to be the most efficient, collecting 84 per cent, 75 per cent and 62 per cent respectively of the expected revenue.

Chapter four examines the issue of municipal debt. In total, municipalities in South Africa are owed over R50 billion. Such debt levels pose significant risks to service delivery in a number of municipalities. This chapter shows that non-payment by organs of state is a particularly large challenge as the amount owed by organs of state is growing significantly. The main drivers of non-payment relate to weak debt management capability, poor compliance with relevant debt management rules, lack of forward planning, as well as poor debt record management.

Chapters five and six hone in on some interventions made by government to address challenges facing local government. Chapter five reviews the “Back to Basics” (B2B) programme of the Department of Cooperative Governance and Traditional Affairs (COGTA). This programme is

a recent example of an institutional level response to poorly performing municipalities. The chapter assesses the success of the B2B programme and determines whether the latest support programme has brought any performance improvement in identified municipalities. It finds that municipal powers and functions are shared, outsourced and cross-substituted between municipalities, which causes problems in terms of monitoring and evaluation of municipal performance over time.

Chapter 6 assesses the regulations on minimum competency levels spearheaded by the National Treasury. Over the years, government has implemented a range of capacity building interventions to assist poorly performing municipalities. The regulations on competencies initiative is an example of an individual level intervention aimed at improving human capital. The chapter notes, however, that there was no common understanding of capacity building and initiatives are not coordinated well. In addition, the chapter notes that the roles, responsibilities and governance arrangements are not streamlined to support LG capacity building. The emphasis should be on avoiding duplication and ensuring a coordinated approach.

Chapter seven interrogates the issue of municipal functionality. The chapter notes with concern that various institutions, including the National Treasury, COGTA and the South African Local Government Association (SALGA), define functionality differently. In the absence of a common definition, interventions to correct the problem will target different municipalities and sometimes overlap. Due to the lack of a commonly accepted definition of functionality, the lists of dysfunctional municipalities and their order of priority differ, depending on the institution undertaking the assessment. As a result, many efforts to correct dysfunctionality have had little impact.

Chapter eight examines the LG infrastructure delivery management systems. The chapter notes with concern that municipal infrastructure delivery programmes are characterised by management and spending inefficiencies that include project completion delays, budget overruns, asset deterioration, and under-utilisation among others. The research finds that efficient infrastructure delivery processes are hampered by, among other factors, gaps in planning and prioritisation processes, deficient project management capabilities, stringent regulations and weak intergovernmental coordination.

Chapter nine evaluates infrastructure spending efficiency with a view to identifying bottlenecks that hamper the development of an effective, efficient and sustainable infrastructure life-cycle management capacity. Spending efficiency estimations show mixed results across the various types of infrastructure, types of municipal services and across provinces. Some municipalities are more efficient in providing electricity, while others are more efficient in providing water and sanitation infrastructure.

Chapter ten examines the city region concept and its potential to address South Africa's development challenges. Using case studies of Bangkok metropolitan region (BMR) in Thailand; São Paulo metropolitan region (SPMR) in Brazil; metropolitan region of Barcelona (MRB) in Spain and Mexico City metropolitan area in Mexico, the chapter underscores the

potential of a city regions development framework in South Africa. City regions provide opportunities to deal with common problems, such as sanitation, transport and waste, efficiently and in a manner that is developmental and innovative. There are good prospects for functional city regions in South Africa, to the extent that the appropriate institutional and policy framework and financial incentives are put in place.

Chapter 2:

With respect to supplementary revenue sources for local government, the Commission recommends that:

1. The Minister of Finance should take steps (including piloting) to add the following supplementary revenue sources to the list of allowable taxes for different types of municipalities in a differentiated manner that could include, the development charges, tourism levies, land value capture mechanisms, tourism levies and fire levies. Fire service levies in particular should be considered for the municipalities that are to be authorised for this function. The greater potential for expansion of own revenue sources in urban areas should be compensated for by changes to the division of revenue to increase transfers to rural areas.
2. The Minister of Finance should proactively inform municipalities on various land value capture mechanisms, that municipalities can take advantage of in order to supplement their current own revenue sources.

Chapter 3:

With respect to optimising traditional own revenue sources, the Commission makes the following recommendations::

1. The Minister of CoGTA, in consultation with the President of SALGA should ensure that the credit control systems of Eskom and municipalities are aligned by means of an MOU, and that Eskom assists municipalities with credit control via electricity disconnections within the municipality's area supplied by Eskom;
2. Provincial governments facilitate the process of municipalities in the same district municipality pooling their resources to attract qualified property valuers, where there is a need do so in order to ensure that properties are accurately valued, and to share the costs associated with the valuation process;
3. The Minister of CoGTA, in consultation with the Minister of Finance and provincial governments should assist local municipalities to build capacity for property rates collection.

Chapter 4:

With respect to municipal debt, the Commission makes the following recommendations::

1. The Minister of CoGTA, in consultation with the Minister of Finance, and provincial governments should assist local municipalities, especially those with limited resources, to develop effective credit control systems;
2. Municipalities should apply the usual credit control measures (including interruption of electricity and water services) to national and provincial government departments who do not honour their contractual obligations. In this regard it should be noted that a dispute

about non-payment constitutes an intergovernmental dispute which may invoke the Intergovernmental Relations Framework Act provisions.

Chapter 5:

With respect to the B2B Support Programme, the Commission makes the following recommendations:

1. The Minister of CoGTA narrows the current scope of focus, to performance aspects that are measurable and easily monitored.

Chapter 6:

With respect to the minimum competency regulations, the Commission makes the following recommendations:

1. The Minister of CoGTA (i) defines the roles, responsibilities and governance arrangements underpinning the building of a quality Local Government civil service, and (ii) through MoUs improves and strengthens coordination among government departments that are building capacity of municipalities in order to avoid duplication and gaps between different role-players, while paying specific attention to the requirements of any particular municipality receiving intervention.
 - 1.2 Based on an assessment of the specific needs of a municipality, the Minister of Finance and Minister of CoGTA jointly, and in consultation with provincial governments, should prioritise technical support for new systems, innovative business process redesign and change management.
 - 1.3 The Minister of Finance should conduct regular assessments of the minimum competency regulations to determine their impact and whether there are tangible improvements as a result of complying.

Chapter 7:

With respect to municipal functionality, the Commission makes the following recommendations:

1. The Minister of CoGTA, the Minister of Finance and the President of SALGA jointly lead the development of a government-wide accepted definition of ‘municipal functionality’. The definition should be based on the six factors put forward by the Commission: maintenance and performance of systems, processes and practices in governance, service delivery, financial management, leadership, political management, and human resources. Further, they should ensure that the accepted indices for measuring dysfunctionality should be explicit. Indicators of dysfunctionality should be chosen carefully and should exclude factors that are outside the current control of municipality. This definition can be used across government, including in targeting capacity support grants and further differentiating conditional grants.

Chapter 8:

With regard to local infrastructure delivery management and its fiscal implications, the Commission makes the following recommendations:

1. The Minister of COGTA and the Minister of Finance jointly should, as part of the ongoing local government infrastructure grant reforms, strengthen the linkage between technical project planning processes and budgeting and foster smooth intergovernmental infrastructure coordination, including the following:
 - 1.1. Time-bound plans for consolidating all municipal infrastructure grants into the respective existing sector-specific grants and thereby provide the key sector department with the authority to carry out their infrastructure support mandate;
 - 1.2. Clarification of roles and responsibilities especially in the delivery of water and electricity services between local municipalities and district municipalities on the one hand, and public entities, including the water authorities and Eskom respectively. With respect to specific local geographic areas, these roles and responsibilities must receive further expression in an MoU. This will enable more direct targeting of funding for services in the Division of Revenue Act.
2. The Minister of COGTA should establish an infrastructure inspectorate through the MISA to assess management performance processes and capacity within municipalities to implement grant-funded and non-grant-funded infrastructure projects on a continuous basis.
3. The MISA inspectorate should undertake infrastructure delivery management capability assessments, quality inspections of new and existing built infrastructure, project management and delivery audits and advise on alternative approaches, materials or technologies for infrastructure delivery through the development of infrastructure blueprints for various types of municipal facilities.
4. The Minister of COGTA should align inspectorate assessments to the Division of Revenue Bill conditions for allocation, reporting and the disbursement of grants. This must be in line with the recently established Budget Facility for Infrastructure Programme criteria for appraising and budgeting for infrastructure projects.
5. The Minister of Finance, jointly with the Minister of COGTA, MECs for Finance and other provincial government departments, should within a DM area pull together the various project management resources present from GTAC, MISA, MIG administration and the respective municipal PMUs, to create a shared project management facility to improve the oversight capacity in respect of projects and to protect the financial interest of local government against contractor misconduct.

Chapter 9:

With respect to infrastructure investment efficiency, the Commission makes the following recommendations:

1. The MECs of provincial COGTAs should strengthen the existing infrastructure delivery intergovernmental forums to facilitate peer learning of best infrastructure management practices across municipalities and to foster coordinated infrastructure planning.

Chapter 10:

With respect to city regions, the Commission makes the following recommendation:

1. The Minister of COGTA should assess the requirements in respect of key success factors for city regions to address inclusive development and local government service delivery failures, including:
 - Legal provisions;
 - Institutional setup scenarios - involving provincial government and/or metros and/or district municipalities and/or local municipalities, depending on the context;
 - Financial incentives; and
 - Rural and peri-urban developmental impact scenarios.

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Chapter 1: Addressing Local Government Sustainability

Mkhululi Ncube and Pundy Pillay

Introduction

It is generally accepted that equitable growth and development in South Africa depends critically on a well-functioning LG sphere. To address the national challenges of low economic growth, high unemployment and socially unacceptable levels of poverty and inequality in the country, it is vital that municipalities are able to perform efficiently and effectively across the country.

It is also well known that the capacity and capability of LG varies considerably across the country, especially between metropolitan municipalities on the one hand, and district and local municipalities, on the other. Within local municipalities, the levels of efficiency also vary significantly between urban and rural. Finally, there are serious questions being raised about the effectiveness of district municipalities to carry out their respective mandates, and indeed their relevance in the intergovernmental make-up of the country now.

This Division of Revenue (DoR) submission focuses on addressing issues relating to LG sustainability. In particular, the following chapters focus respectively on financial sustainability of LG, municipality dysfunctionality and capacity, infrastructure delivery management and efficiency, and LG structure, specifically through the example of the Gauteng City-Region. The present chapter provides some background information to the submission.

Local government: Twenty-five years on from the advent of democracy

Local government is the sphere closest to people and it is the face of government in communities. The sphere plays a crucial role in the governance of the country and in the provision of basic services. In the past 25 years, LG has significantly improved access to basic services to poor households. As at 2016, 90 per cent of households in South Africa had access to piped water; 88 per cent to electricity from 8 per cent in 2002; and 64 per cent had waste removed regularly. Access to sanitation remains low compared to other services (Statistics South Africa, 2016). As at 2016, 13.7 per cent of households used unventilated pit toilets, 2.2 per cent relied on bucket toilets and 2.4 per cent had no sanitation at all (*Ibid*).

Although access to all basic services has improved since 1994, the quality and reliability of these services remains a big challenge. Inefficiencies are not uncommon, as are resource leakages and corruption. Infrastructure is poorly maintained, leading to poor quality services and losses in revenue. The current intergovernmental fiscal relations system incentivises over-provision of new infrastructure without providing for related operating/maintenance costs (FFC, 2018).

In the past 25 years, the LG sector has experienced significant structural, policy and financial transformation that still has a bearing on its current state and performance. The following three sections discuss briefly some of the structural, policy and financial changes that the sector has undergone in the past 25 years.

Structural changes

In the pre-1994 political dispensation, the LG sector comprised 1 262 different local authorities. In 1994, they were consolidated to 843. In 1999, the number of municipalities was reduced to 284, 283 in 2006, 278 in 2011, and finally, 257 in 2016. These successive amalgamations of municipalities have resulted in South Africa having one of the lowest number of municipalities in the world relative to its population. Conversely, South Africa has the highest average population sizes per municipality (Vacu and Ncube, 2017). The assumption underpinning most amalgamations was that economies of scale would be achieved in larger municipalities. The view was that the consolidation of municipalities improves their effectiveness and efficiency, or simply "bigger is better" or "bigger is cheaper". In addition, bigger is more financially viable and sustainable. Although there is merit in this argument, research by the Commission in 2016 has shown that the successive demarcation processes have been costly, and in the short run have impacted the financial sustainability of affected municipalities. Short run costs¹ often undermined the viability and sustainability of municipalities. The Commission's research also noted that demarcations cannot correct dysfunctionality or make municipalities financially viable, as the 2016 demarcations were purported to do.

Policy and legal changes

The current situation of LG owes its origins to the 1998 White Paper on Local Government (DPLG, 1998). The white paper, which has remained the guiding policy and legislative framework for LG, originally envisaged a sector that is well funded and enabled by different policy, legislative and regulatory measures to discharge its mandate effectively and efficiently. The period since the white paper was introduced has been marked by a number of initiatives meant to assist in building a modern LG sector. On the legal front, several laws have been introduced, namely the Local Government Municipal Structures Act, 1998 (Act No. 177 of 1998); the Municipal Systems Act, 2000 (Act No. 32 of 2000); Municipal Fiscal Powers and Functions Act, 2007 (Act No. 12 of 2007); the Municipal Property Rates Act, 2004 (Act No. 6

¹ Costs included the integration and consolidation of programmes, upgrading of data services; rationalisation of services, fees and tax rates, payroll systems, voters roll and administrative policies; change management costs; harmonisation of systems, harmonisation of asset registers, human resources policies, wages, salaries and allowances; and costs associated with coordination, communication, and retraining and retooling of workers.

of 2004); the Local Government Municipal Finance Management, 2003 (Act No. 56 of 2003), and Intergovernmental Relations Framework Act, 2005 (Act No. 13 of 2005). The Municipal Fiscal Powers and Functions Act and the Municipal Property Rates Act are particularly relevant to the present study as they regulate the imposition of municipal taxes and surcharges, and the levying of municipal property rates respectively. In various ways, these pieces of legislation are designed to ensure that the LG fulfils its constitutional mandate.

Other initiatives that have underpinned developments in the LG are the Local Government Turnaround Strategy of 2009 (COGTA 2010); the 2011 National Development Plan (Chapter 13) (NPC, 2012); the Spatial Planning and Land Use Management Act, 2013 (Act No. 16 of 2013) (SPLUMA), and the Integrated Urban Development Framework of 2016 (COGTA, 2016). To enhance the performance of the sector, initiatives such as the 2004 Project Consolidate (DPLG, 2004); 2006 Siyenza Manje Project (DPLG, 2006); the Local Government Five-year Strategic Agenda (COGTA, 2014) and the 2014 Back to Basics (B2B) programme (COGTA, 2014) have been adopted. These initiatives, collectively meant to build a strong LG, have achieved mixed results. While the sector has recorded significant progress in the provision of services and the building of infrastructure (as noted above), deficiencies in the quality of LG services and capacity remain the sector's biggest challenges.

Fiscal changes

As LG was experiencing these structural, legal and policy changes, the Local Government Fiscal Framework (i.e. revenue sources and expenditure responsibilities) was also undergoing transformation. Over the last 20 years, the total resource envelope to the whole of LG has increased modestly, but not in line with the expenditure demands of the sector's services. The LG share of the Division of Revenue (DoR) increased from three per cent (which translated to R6 billion in 2000) to 9.1 per cent share of the DoR, translating to R120 billion in the current financial year. Although the 9 per cent allocation takes into account the fact that LG raises its own revenue, the fairness of this vertical division of revenue has remained a source of disagreement, especially considering that demands for LG services have expanded in the past two decades.

In terms of the composition of the fiscal framework, 25 per cent of municipal funding comes from transfers, and 75 per cent from own revenue sources. The transfers are intended to fund poor households' services while own revenues are meant to fund non-poor households as well as businesses.

Own revenues are raised from property rates and tariffs from "trading services": electricity, water supply, sanitation and solid waste removal. In the case of property rates, property valuations remain a big challenge. For rural municipalities, the property rates revenue base is also limited by the communal tenure system. The potential of property rates revenues is also hamstrung by consumer resistance and poor billing systems.

With regard to tariffs, larger municipalities have historically generated surpluses on their electricity, water and sanitation trading accounts, which has allowed them to subsidise some of their services. These surpluses are facing tremendous pressures partly due to regulatory measures (specifically electricity), and partly due to affordability. Consumers of electricity and water services have faced high increases in tariffs, which have had a significant impact on household budgets, and consequently revenues collected by municipalities. Revenue shortfalls have led to many municipalities failing to settle their bills, especially to Eskom and water boards.

Transfers are divided into two streams: unconditional (Local Government Equitable Share (LES)) and conditional grants. The LES, which is allocated through a formula to the country's 257 municipalities, is meant to subsidise free basic services for poor households. In 2012, the LES was reviewed and the new system has a more redistributive structure as more funding is being channelled to poorer rural municipalities. However, this review looked only at the LES formula, and did not examine the total amount allocated to the LES ("vertical division"). The new formula (or even the old one) is still largely population driven. The Commission (2017) has previously underscored the point that the LES needs to be based on a sound costing framework for basic goods and services. It has suggested that the costs of basic services should depend on objectively derived cost estimates. Without a proper costing framework, the adequacy (or otherwise) of the subsidy will remain unknown.

Conditional transfers fund mainly the capacity building initiatives and capital accounts of municipalities. Metropolitan municipalities and intermediate cities finance about half of their own capital requirements either with debt finance, reserves and other "own sources" of capital. At the other extreme, rural municipalities rely on transfers from the national fiscus to fund 80 per cent of their capital expenditure. However, the Commission's research has shown that many municipalities face huge fiscal gaps on their capital accounts, even after taking into account all transfers. Another challenge on the capital account is the persistent under-spending of capital budgets, which is believed to be related to problems with planning, administrative and technical capacity.

Local government challenges

Many municipalities are dysfunctional and barely viable. In 2018, the functionality levels of the majority of municipalities had worsened. In his 2018 budget statement, the Minister of COGTA painted a very grim picture of the current state of LG: only 7 per cent of the municipalities are functioning well; 31 per cent are reasonably functional and 62 per cent are either almost dysfunctional or outright dysfunctional. District municipalities in particular are in a more precarious situation. Of the 55 municipalities regarded as dysfunctional, half of them (27) are district municipalities, i.e. over 60 per cent of district municipalities are in the dysfunctional category (Mkhize, 2018). The Auditor-General of South Africa (AGSA) has also painted the same grim picture. The last general audit report on municipal accounts (2015/16) stated, "the financial health of 65 per cent of the municipalities was either concerning or requiring intervention" (Auditor-General of South Africa, 2017). The AGSA noted that in

total, 27 per cent of municipalities were in “a particularly poor financial position by the end of 2015/16, with material uncertainty with regard to their ability to continue operating in the foreseeable future” (*Ibid*).

The sustainability of municipalities continues to be at risk, because of the following factors:

- **Poor financial management.** Financial mismanagement is rampant in the LG sector. Many municipalities are spending more than the resources they have available, i.e. their budgets are unfunded. In 2017 just over half of the municipalities (56 per cent, or 145 of 257), passed funded budgets; and for the rest (44 per cent), municipal councils voted to adopt budgets that they knew were not funded. In such cases, a municipality will inevitably find itself in financial distress.
- **Profiting from procurement has become endemic.** As elsewhere in government, LG has been prone to corruption. Corruption hampers the provision of basic services and constrains the growth and development of municipalities. The AGSA noted in January 2018 that “widespread ‘rent-seeking and corruption’ between public representatives and businesses were at the heart of the infrastructure crisis bedevilling municipalities” (30 January 2018 *Business Day*²).
- **Declining or stagnant “own revenue:** Municipal own revenues streams have become less buoyant. There are many causes for own revenue not growing including the stagnant economy and rising unemployment, the static nature of current taxing powers, the political reticence to collect to the fullest from residents but preference to rely on transfers, and the “culture of non-payment” (not only by residents, but now also by national and provincial departments not paying their electricity and water accounts). The consequence of declining or stagnant own revenues has been an increase in reliance on transfers, and consequently vertical fiscal imbalances.
- **Slow growth of transfers.** Municipalities are no longer able to count on transfers to meet their ever-increasing obligations as transfers are also under pressure (due to, among other factors, the slowing down of the economy, fiscal consolidation measures and revenue under collection). For instance, during the 2018 MTEF, LG grants were cut by R13.9 billion. Worryingly, these cuts fell disproportionately on infrastructure grants, depriving municipalities of essential investment resources, and thus undermining their future infrastructure led growth.
- **Unhealthy balance between core and non-core municipal services.** Section 153 of the Constitution requires municipalities to prioritise basic services and social and economic development in their budgets. However, many municipalities spend a high proportion of their budgets on administration and non-core functions. A Commission (2017) study on the cost of basic services has shown an unhealthy balance between administration costs and costs for core services. Scarce resources are expended on personnel, at the expense of core service delivery. The National Treasury has also noted that many municipalities used resources gained from the new LG equitable share formula

² Magubane, K. 2018. Kimi Makwetu Blames Infrastructure Failures On Local Corruption. Available on: <https://www.businesslive.co.za/bd/national/2018-01-30-kimi-makwetu-blames-infrastructure-failures-on-local-corruption/>

(introduced in 2013/14) to increase salaries rather than expand service delivery. Similarly, the AGSA (in the audit of MISA 2018) has also observed that municipalities used funds meant for infrastructure to pay salaries and creditors.

- **Poor asset management.** Evidence shows a mismatch between repair and maintenance requirements in municipalities. Municipalities tend to prioritise new assets, and neglect budgeting for the repair or maintenance of such infrastructure. As a result, the performance and longevity of the infrastructure assets is undermined, leading to poor quality service delivery.
- **Weak municipal accountability and oversight institutions.** Commission (2016/17) research showed that oversight committees in municipalities (i.e. municipal public accountability committees and audit committees) are weak and inadequately empowered with research capacity. These oversight structures therefore cannot effectively hold the executives to account. In addition, councils lack accountability. For example, the AGSA reported (2015/16) that there is little or no response from councils to their annual findings and advice. Particularly irksome is the failure to take into account anti-corruption measures in procurement: “1 648 instances of suppliers submitting false declarations of interest as part of the procurement processes”, were brought to the attention of councils by the AGSA, while “47 per cent of the municipalities did not investigate any of the cases we reported to them.” The AGSA further noted “instances of employees not declaring interests had an even lower investigation rate, with 64 per cent of the municipalities not investigating any of the cases.”

In summary, the challenges facing LG continue to undermine its capability to discharge its constitutional mandate. This is despite many solutions put forward over the years by the Commission and many other stakeholders.

Under the theme of *Restoring Local Government Public Finances*, the Commission’s 2020/21 annual submission assesses in detail the above challenges, and specifically the issues of financial sustainability, dysfunctionality and capacity, infrastructure efficiency and the potential of the “city region” to address South Africa’s development challenges.

2020/21 annual submission chapters

This DoR submission provides a detailed analysis of a set of important issues in the LG sector illustrating both continuing progress across the sector as well as highlighting persistent economic, social and other developmental challenges. Following this introductory chapter, the rest of the submission is organised as follows:

- Chapter 2 provides an in-depth analysis of “financial sustainability” in the LG sector. It examines three important and related issues in this regard, namely the evolution of the LG fiscal framework, the current and future potential of property rates, and the causes and implications of the municipal debt crisis. The chapter also proposes a set of alternative revenue sources for municipalities.

- Chapter 3 focuses on the issue of dysfunctionality and the interventions that government has implemented to improve the performance of municipalities. Since the advent of democracy, government has implemented a range of capacity building interventions to assist poorly performing municipalities. Some of these interventions have been targeted at the institutional level, while others have focused on building the individual, human capital capacity of municipal employees. After discussing the concept of dysfunctionality and how it relates to municipalities in South Africa, the chapter hones in on the B2B programme as an example of an institutional level response to poorly performing municipalities. The analysis then assesses the minimum competency regulations spearheaded by the National Treasury. The rationale is that an assessment of these interventions may bring to light aspects that future interventions could incorporate to improve the chances of success in LG.
- Chapter 4 provides an analysis of LG infrastructure delivery management and efficiency. Municipalities spend more than R40 billion per annum on infrastructure but the infrastructure delivery programme is characterised by widespread delivery management inefficiencies. Given the importance of infrastructure for growth and development nationally, and more specifically in municipalities, an analysis of how infrastructure funds are being spent and their associated outputs and outcomes is crucial for the design and implementation of broader policy, such as for example, sustainable local economic development.
- Chapter 5 attempts to “look forward” with an evaluation of the LG structure. In particular, it examines the potential of the “city region” to address South Africa’s development challenges. Considering that it is 25 years since the advent of democracy and the current LG dispensation, this chapter looks at whether the intergovernmental system comprising provinces and three categories of municipalities is still appropriate, particularly in the light of significant continuing challenges in both the provincial (e.g. education and health), and LG (e.g. basic services) spheres. Using a review of the international literature and the case study of the Gauteng City-Region, this chapter explores the potential of the city region to promote more effective service delivery and sustainable development nationally.

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Chapter 2: Rethinking Municipal Taxation and Revenues: Towards an alternative funding model for local government

Mkhululi Ncube

Introduction

The local government (LG) sector plays a crucial role in the delivery of basic public services and the provision of fundamental public infrastructure. Since the White Paper on Local Government (1998), the roles and responsibilities of LG have expanded, albeit against a backdrop of limited finances. The stunted growth that has characterised the South African economy since the 2008 financial crisis has intensified the financial challenges of the sector. The fundamental problem confronting most municipalities is the widening gap between the available financial resources and the delivery of service needs. Demand for the sector's services has increased exponentially, thanks to a plethora of factors, including acute levels of unemployment and poverty, rapid and unplanned urbanisation, growing backlogs of infrastructure needs and poor maintenance of existing infrastructure. Given the limited resource pool, many municipalities are hamstrung to fulfil their constitutional mandates. Municipalities cannot count on transfers to plug the resource gaps, as this revenue window is heavily constrained due to, among other things, under collection of revenues and fiscal consolidation measures. Given the muted growth of the economy, LG cannot count on conventional revenue sources either, as many municipalities have limited space to optimise conventional revenue sources. Property rates have been stagnant for the past decade due to a number of reasons, including the high levels of unemployment and limited formal employment opportunities, poverty, inadequate capacity to assess property values or collect property taxes, difficulties in property tax administration, many exemptions, unclear powers, and the sometimes acrimonious relationships between municipalities and traditional leaders (in the form of Chiefs) which makes the collection of property taxes difficult. Service charges have also experienced diminished buoyancy due to, among other factors, poor billing systems, the capping of tariffs on electricity, and big water and electricity losses as a result of decaying infrastructure.

In order to fulfil their mandates, municipalities should have adequate own sources: both tax and non-tax revenues. As virtually all municipalities face diminishing own revenue and, in almost all instances, a very difficult task of financing their own infrastructure and services to meet the needs of a rapidly growing population, the urgency to find alternative revenue sources to augment conventional ones cannot be overemphasised. Internationally there is a sharp increase in interest on alternative revenue sources, as the systemic shortages in conventional revenue sources are limiting the performance of LG. This then begs the questions: What are the alternative revenue sources for different tiers of South African LG? How applicable are

these alternative revenue sources, if at all? What is the revenue potential of these alternative revenue sources? The purpose of this chapter is to provide answers to these questions.

The main objective of the chapter is to provide a comprehensive review of alternative sources of LG revenue and financing to serve as a reference for LG policy makers and field practitioners in designing and implementing LG financing and revenue instruments. It identifies alternative financing instruments for LG and proposes a coherent financing model for the sector that takes into account contextual factors of each LG tier and changes in their mandates.

Rationale

This chapter proposes an alternative financing model for LG to contribute to ongoing efforts to build a viable and capable sector, as emphasised in the National Development Plan (NDP). Chapters 13 and 14 of the NDP have identified funding as the major bottleneck in building a capable and developmental LG (National Planning Commission, 2011). The NDP also emphasises the need to find ways of improving the performance and viability of municipalities. In this regard, the study aims to contribute to the NDP's goals of building a capable LG through defining new ways of improving the LG fiscal framework. It provides fundamental insights into some of the funding issues that compromise the ability of the local sphere to successfully execute its mandate. It also fits well into the Commission's 2020/21 theme of "Renewing public finances of local government", as it highlights a number of financing options from which LGs can choose to complement their own current revenues.

The chapter is organised as follows:

- Section 2 presents the evolution of the LG fiscal framework. The discussion here includes the structure of the Local Government Fiscal Framework (LGFF) and, albeit briefly, the performance of different revenue instruments.
- Section 3 is a review of the literature on alternative revenue instruments for LG and the basic criteria for identifying an ideal revenue source for the sector. The literature on the actual practices of tax assignments is also surveyed.
- Section 4 presents the different methodologies adopted to tackle the above research questions.
- Section 5 discusses the findings, using the different principles of tax assignment to evaluate the potential of different revenue source for different layers of LG.
- Section 6 concludes the chapter.

Overview of the LG Financing Framework

The Evolution of the Local Government Fiscal Framework (LGFF)

The LGFF³, established in 1998, is broadly anchored in Sections 227-230 of the Constitution. Section 227 entitles municipalities to an "equitable share" grant from nationally raised revenue.

³ According to the Commission (2012) the LGFF can be broadly defined as the funding arrangement or framework required to *ensure* that municipalities are sufficiently financed to fulfil their constitutional mandates to render adequate services to communities.

This transfer window enables municipalities to provide basic services and perform other constitutionally assigned mandates. Municipalities are also entitled to additional conditional or unconditional grants from national or provincial government. Sections 229 and 230 grant municipalities powers to raise own revenues through taxes or borrowing, subject to the provisions of other legislation. Although the Constitution provides municipalities with powers to access own revenues, these powers are largely restricted. Powers to levy taxes are limited “in that they cannot unreasonably prejudice national economic policies and economic activities”, while borrowing powers are limited by the “requirement that borrowings do not fund budget deficits”.

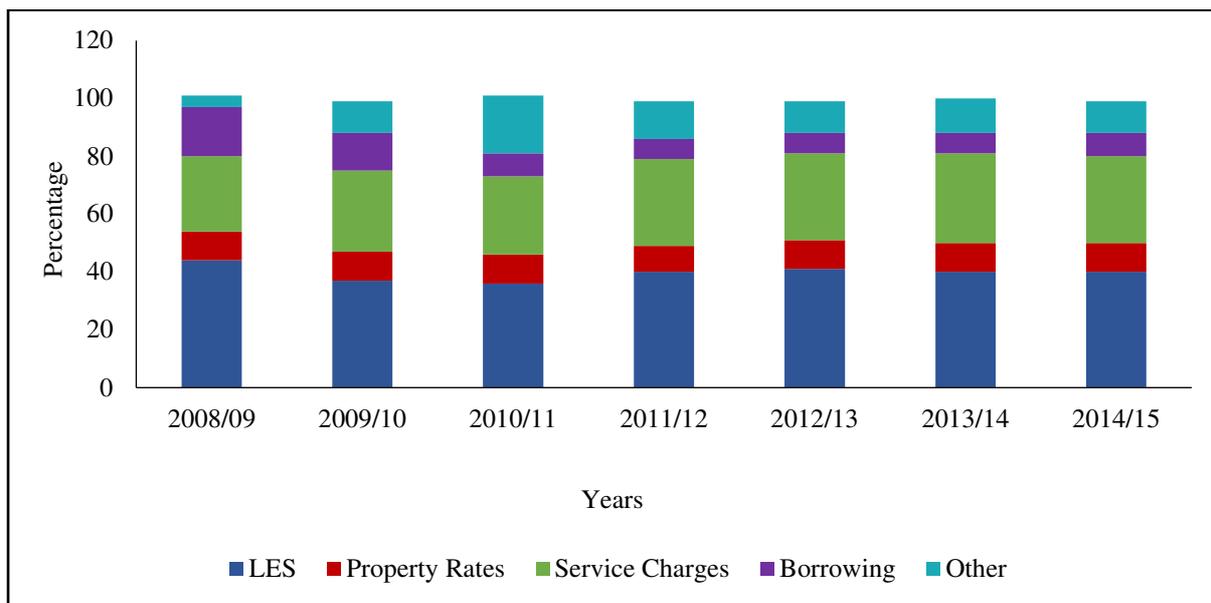
The development of LG owes its origins to the White Paper on Local Government (1998), which is discussed in detail earlier in this report. (See page 19.) Also discussed earlier are other initiatives underpinning developments in LG. (See page 20.)

These initiatives, designed to build a strong LG, have had mixed results. Progress has been made in areas of access to services and building of infrastructure to provide basic services. Challenges remain in the areas of governance, infrastructure reliability and maintenance, and overall service delivery. The overall financial wellbeing of the sector is still far from optimal. As noted above, many municipalities have a revenue problem, which requires serious consideration of the revenue options beyond the current traditional sources. The next sections provide an overview of the structure and performance of current revenue streams.

Structure of the LGFF

Local government relies on four revenue sources: transfers (conditional and non-conditional), property rates, service charges and debt finance. Transfers are by far the largest source, followed by service charges, property rates and then debt finance. The distribution of municipal revenues is shown in Figure 1. Service charges remain the most dominant own revenue sources for municipalities. Figure 1 also shows that the share of property rates has remained stagnant at 10 per cent for the past decade. The share of borrowing, which is mainly the preserve of metros and a few intermediate cities, declined in the post financial crisis, but has since moderated at 8 per cent of operating revenues.

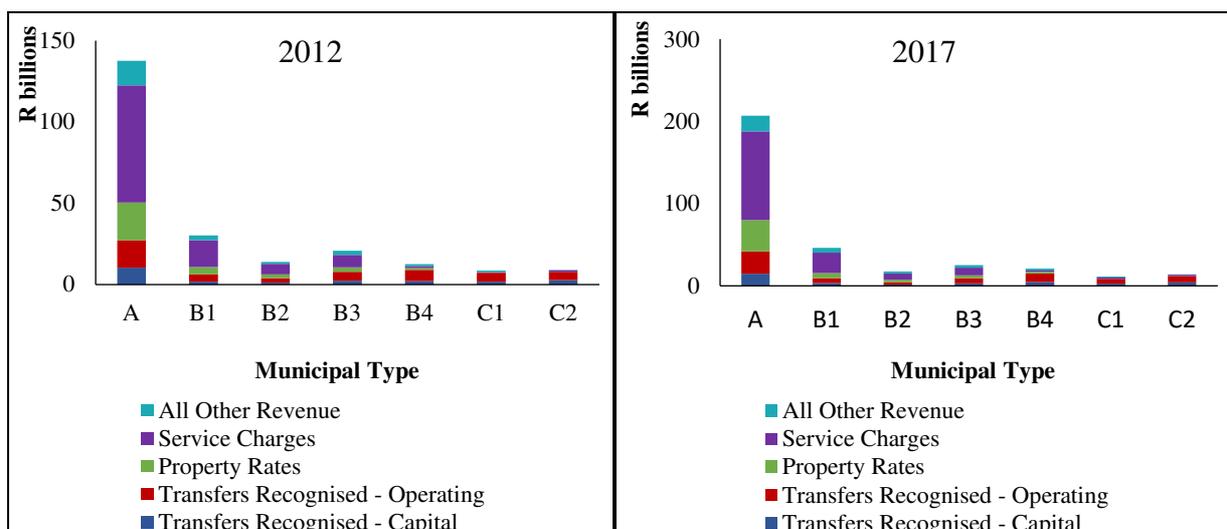
Figure 1: Municipal revenue shares



Source: Commission's calculations from the National Treasury database

Figure 1 masks many disparities in the LG fiscal framework. The mix of own revenues and transfers varies substantially by type of municipality. For the whole of LG, own revenues fund 75 per cent of budgets, but in rural areas (with higher poverty rates) transfers can fund up to 80 per cent of budgets, while in metros and large cities, transfers fund only about 10 per cent of their budgets (Figure 2). Cities are highly dependent on service charges, which account for close to 40 per cent of metro and intermediate cities' revenues. Property rates contribute 18 per cent and 17 per cent of metros and intermediate cities revenues respectively, while for rural municipalities, property rates account for 10 per cent. As shown in Figure 2, district and rural municipalities are highly transfer dependent as they have few own revenue sources.

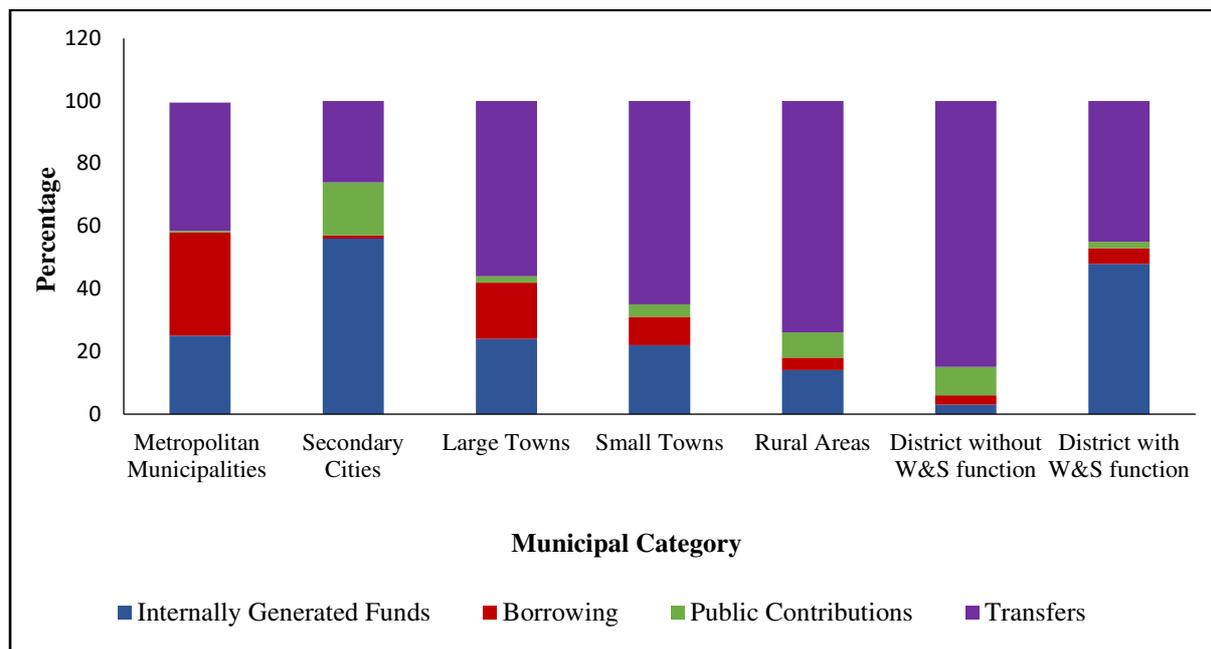
Figure 2: Major sources of revenue by municipality type



Source: Commission calculations from National Treasury database

Transfer dependency is also evident from the municipal capital accounts (Figure 3). On the capital account, all municipalities are heavily reliant on transfers, save for metros and intermediate cities that finance about half of their own capital requirements through debt financing, reserves and other “own sources”. At the other extreme, rural municipalities rely on transfers to the tune of 80 per cent to fund their capital expenditures. The capital account also shows that borrowing is largely concentrated in metros and intermediate cities. On the whole, borrowing as a revenue source remains heavily concentrated in a few municipalities - metros and intermediate cities. However, many studies (e.g. Slack, ed. 2013) show that metros and intermediate cities are not fully exploiting borrowing as a revenue source.

Figure 3: Capital finance profiles (percentage)



Source: Commission calculations from National Treasury database

Current revenue challenges and consequences

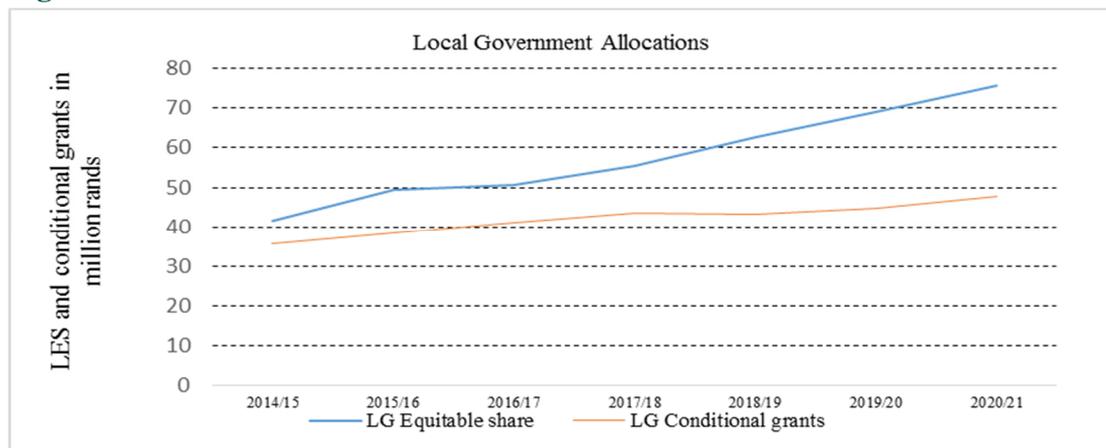
The current revenue streams are fraught with many challenges which place the viability and sustainability of many municipalities at risk. This section summarises the performance of the five main municipality revenue streams:

- **Property rates:** Property rates, which should respond to economic and population changes, have not done so. In many instances they have stagnated. Many reasons account for this, including the high levels of unemployment and limited formal employment opportunities, poverty, inadequate capacity to assess property values or collect property taxes, difficulties in property tax administration, many exemptions, consumers’ unwillingness to pay (given poor service delivery in some municipalities) and the unclear powers, and sometimes acrimonious relationship, between the municipality and traditional leaders (in the form of chiefs) which makes the collection of property taxes difficult.
- **Service fees:** The key drivers of service revenues are electricity and water charges. For many years, municipalities have been heavily dependent on electricity, and surpluses

from electricity have been used to subsidise many other municipal services. Recently, however, with the steep Eskom tariff increases coupled with NERSA capping of prices that municipalities charge final consumers, a sharp decline in surpluses has been evident. The decline in surpluses has also seen many municipalities failing to service their Eskom debt. Water revenues have also been under pressure. In fact payment for water services has actually declined from 61.9 per cent in 2005 to 43.9 per cent in 2015 (Commission, 2019/20). The reasons for this include the culture of non-payment (Commission 2019/20), poor billing systems, climate change induced droughts, and water losses associated with decaying infrastructure.

- **Borrowing:** Borrowing among municipalities is generally low. Municipalities have not fully leveraged on borrowing for a number of reasons. First, the South African credit markets for municipalities remains largely underdeveloped. Second, as Brown *et al* (2008) note, many municipalities have poor financial management skills and information systems that make loans to them very risky for financing institutions and they often borrow in small quantities, which makes financing them expensive.
- **Transfers:** Municipalities benefit from two types of transfers: conditional and unconditional (i.e. Local Equitable Share Grants. During the past decade or so, transfers have come under severe pressure. Low economic growth since the 2008 global financial crisis has had a direct impact on revenues available for sharing. This has also affected revenue collections of LGs as many consumers have defaulted on their bills. Since 2012, the country has adopted fiscal consolidation measures in order to reduce the budget deficit, stabilise the debt/GDP ratio, and reverse a decade-long trend of low growth. LGs have borne the brunt of these consolidation measures (see Figure 4). In the 2017 MTEF, grant baselines for LG were cut by R2.8 billion. In the 2018 MTEF, bigger reductions (i.e. R13.9 billion) were made to the transfer baselines of LG grants.⁴

Figure 4: Fiscal consolidation and LG allocations



Source: Commission calculations from National Treasury database

⁴ These are future planned baseline reductions, but overall the baseline still grow. The affected grants included the Municipal Infrastructure Grants (MIG), Water Services Infrastructure Grant, Urban Settlement Development Grant (USDG) and the Public Transport Network Grant (PTNG).

- RSC replacement grant and fuel levies:** The RSC replacement grant (for District Municipalities (DMs)) and fuel levy (for metros) replaced the Regional Services Council (RSC) and Joint Services Board (JSB) levies that were phased out on 30 June 2006. The RSC and JSB levies were abolished. Although it was a buoyant revenue source, the RSC levies were criticised for their regressivity, due to the fact that they were based on the historical revenue raising capacity of DMs, and for their extensive administration and collection costs to municipalities, and high incidents of evasion (Dawood and Pahwa 2006; Commission, 2013). The RSC Levy Replacement Grant was then introduced as a temporary measure focusing on DMs. However, it has lasted more than many subsequent conditional grants and a suitable replacement for the RSC levy has not been found. Currently the RSC Levy Replacement Grant is funding about 22 per cent of DM budgets. The grant is criticised for being regressive, as allocations are based on previous (2006/07) collections, and thus perpetuate historical inequalities as former homeland areas that generated smaller revenues continue to receive relatively smaller amounts of this grant. In other words, the RSC Levy Replacement Grant has simply replicated the historical distributional patterns and perpetuates historical inequalities.

Another contentious issue has been the inadequate allocations to DMs with water and sanitation responsibilities and those without. Of concern also has been the fact that this grant has been growing at a rate lower than inflation for C1s for the past seven years. The fuel levy's design, although it has been touted as an own revenue instrument, mimics that of unconditional grants, as each metro receives its share from a fixed sum of revenue from the fuel levy. When compared to the previous RSC levies and other own revenues, the general fuel levy tends to limit the autonomy and flexibility of metros.

This brief evaluation of the performance of the main revenue streams for local authorities suggests that municipalities have a serious revenue problem. This problem can be alleviated by minimising excessive and unproductive spending, pursuing efficient revenue mobilisation efforts, optimising current revenue streams or casting the net wider for alternative revenue streams. This paper examines the potential of alternative revenue sources for LG. The next section reviews the literature on alternative revenue sources.

Literature review

Alternative funding/financing instruments

The major own revenue sources for municipalities across the globe are utility charges, taxes on vehicles, user fees, and property rates. These taxes are the only ones that pass the stringent tests of a "good" local tax, namely, (a) easy to administer locally; and (b) an immobile tax base does not raise problems of competition among municipalities. However, in a majority of LGs across the globe, these traditional revenue sources are insufficient to cover their growing expenditure needs and obligations, even if they are well administered. There is pressure on LGs to re-examine their revenue structures and even step up their revenue mobilisation efforts. Consequently, interest in alternative funding instruments for LG is growing sharply both in the

literature and in practice. The concept of alternative funding or financing instruments essentially embraces “any strategy involving new funding sources, new financing mechanisms, and new financial arrangements” in the provision of infrastructure and public services (Chen, 2016a). Modern public finance theory has many examples of alternative tax instruments that are appropriate for municipalities. The list of alternative instruments, albeit non-exhaustive, includes: surcharges on personal income tax, value added tax, vehicle and transportation taxes, local business taxes, flat-rate piggyback income taxes, natural resource taxes, hotel taxes, advertisement taxes and amusement taxes.

This section reviews examples of the alternative (both internal and external) funding instruments that LGs have adopted internationally to supplement their traditional revenue streams.⁵

Internal funding/ financing mechanisms

Flat-rate piggyback income taxes (PIT)

The consensus, at least in modern public finance theory, is that, given the mobility of taxpayers, income taxes are best assigned at the central level. Progressive income taxes tend to act as automatic economic stabilisers, a function that should reside with the central government. However, given the increasing role of LGs, many countries are beginning to accept the fact that LGs can handle some of the major tax sources, such as income tax and value added tax. Evidence from a number of countries suggests this is possible if such taxes are properly designed. In many countries a “piggyback” or surcharge on PIT and VAT has been adopted as part of the basket of revenue sources for LG. For many years, countries under the Organisation for Economic Development (OECD) (e.g. the Nordic countries, Switzerland, USA) have used the surcharge on PIT (Martinez-Vazquez, 2013), while in Latin America, Mexico, Brazil and Argentina have adopted a surcharge on VAT for their LGs. In Africa, Dar es Salaam in Tanzania has a surcharge on PIT as well. The most commonly used form of a surcharge is a flat, locally established rate (not the tax liability) on the same tax base as the national income or VAT tax collected by the central government. As it is always collected by central government, revenues are allocated to municipalities on a derivation basis. Municipalities are only allowed the discretion to set the flat rate, although the centre establishes the minimum and maximum rates from which many municipalities pick their flat rate. A surcharge on PIT has some merits. First, a flat rate local surcharge on PIT easily satisfies the benefit principle. Second, it is visible, thus promoting political responsibility and accountability by municipalities. Third, it is also an elastic revenue source. The only drawback with piggybacked taxes is that they require careful co-ordination between the centre and municipalities, and sound data to ascertain their revenue potential.

Local business taxes

Local business tax is another revenue source that is gaining more traction for LGs across the globe (Bird 2003). Such taxes are common not only because they produce substantial revenues for LGs but also because revenues from this source are generally more buoyant than, for

⁵ For a comprehensive review, see also Boadway and Shah, (2007); Martinez-Vazquez and Sepulveda (2012)).

example, property taxes. In South Africa, the idea of a local business tax has been discussed since 2012, when eThekweni municipality applied for permission to levy this tax. Although the application was not successful, many municipalities and public finance practitioners have not relented in arguing for a local business tax. Arguments in support of such a tax have centred on the fact that businesses benefit directly and indirectly from many local public expenditures, and such a tax should serve as a way of recapturing some of these benefits. The benefits these businesses derive from public expenditures (e.g. services and infrastructure provided) is often associated with their size, rather than their profitability. As such this tax is often linked to the size of a business and not the profits it makes. Arguments for this tax have largely focused on the form it should take. For obvious reasons, local business taxes are invariably disliked by business, but favoured by politicians and the public. Given the apparently increasing dependence of countries on urban-based “engines of growth”, the potential for such taxes is greater in larger cities where business activity is concentrated. In South Africa, local business taxes would suit metros, intermediate cities and some fast growing urban municipalities, as they need the revenues to accommodate their rapid growth and development. Local business taxes are more stable and simpler to administer than taxes on profits.

Many scholars (e.g. Bird, 2006 and Gandullia, 2012) have argued for a local business value added tax (LBVT) which is neutral to the factor mix. By being applied equally to labour (payroll) and capital (assets) used by businesses, LBVT minimises distortions on the economy (Bird, 2003). Its base resembles that of the normal VAT although the two taxes function quite differently. In contrast, VAT is destination-based while the LBVT is, in many instances, origin-based as the benefits from services of municipalities accrue at the place of production (not consumption). The experiences of Italy, Japan and France with LBVT show that a local business value added tax is a reasonable way of capturing the benefits that businesses derive from public expenditure. The experience of these three countries further shows that LBVT can be administered efficiently at the local level with no serious economic costs. The only drawback of LBVT is that it requires high levels of accounting and record-keeping and sound tax administration capacity. These requirements make it less of an option for countries where the tax administration is not sophisticated. It is sometimes hard to sell to politicians because there is often an overlap in its tax base with that of normal value added taxes.

Vehicle and transportation taxes

Vehicle and transport levies are another attractive LG revenue source. These taxes take many forms, e.g. a licence to operate a vehicle, a tax on the estimated value of the vehicle, and a sales tax on motor fuel, tolls, or parking fees. In many countries, taxes on surface travel are levied by local authorities. These are generally attractive because they link ownership of a vehicle and benefits in terms of local service and infrastructure usage. Besides being revenue elastic, this revenue source can effectively be used to counteract negative externalities such as air pollution, noise and local traffic congestion. Motor vehicle taxes are attractive especially for financing large city services (Bird and Slack, 2013). Examples from other countries or municipalities also show this diversity. In Barcelona, Budapest, Istanbul and Madrid, residents are taxed based on vehicle ownership and on the value of their vehicle (*Ibid*). In Toronto, vehicle tax is a levy on residents of the city who own or lease a vehicle and is paid when they renew their vehicle

licence. On the other hand, Tokyo charges a tax on the purchase of a vehicle, while Seoul, Shanghai, Guangzhou, and Beijing charge owners of vehicles a tax that is based on the usage and capacity of vehicle. In South Africa, VAT is levied on the acquisition of a car, car licence, toll fees and fuel levies. The VAT on the sale of a car is administered by the central government, while the fuel levy is administered at national level although proceeds accrue to the eight metros. Toll fees on national roads accrue to South Africa National Roads Agency Ltd (SANRAL), a government entity managing national roads. Some of the toll fees accrue to the toll road concessionaires as SANRAL has three 30-year concession contracts in operation. Surcharges on these toll fees is possible since LGs also provide ancillary infrastructure to vehicles passing through their jurisdiction.

Natural resource taxes

Natural resource taxes are charged on extraction activities such as mining and quarrying, forestry, or fishing. Because there is a link between natural resource extraction and the benefit principle at local level, many have argued that this tax should be localised. Extraction activities benefit from local infrastructure (e.g. roads, health facilities) and tend to pollute the local environment. Local taxation of natural resources has met with resistance in many jurisdictions because it may perpetuate uneven development, inefficient population migration, and dislocation of businesses or even fiscal imbalances, especially considering the fact that natural resources are rarely evenly distributed across local jurisdictions. In addition, given the fact that the prices of natural resources are volatile, these taxes may not augur well for LGs who need a stable and predictable revenue base. Although natural resource taxes may be less relevant for many municipalities, they may be relevant for rural municipalities to levy a flat rate surcharge or piggyback a tax on them. Alternatively they could impose levies that would partly pay for the damage on the environment and infrastructure caused by natural resource extraction. Rural municipalities could have weigh-in bridges for trucks that carry natural resources within their jurisdiction to pay a tax or levy.

Development charges (DC)

An increasing number of municipalities in both developed and developing countries supplement conventional revenue sources with development charges (DCs). DCs are one-time levies imposed by municipalities on property developers of new or existing properties. This is usually done at the point when the property is subdivided or when a building permit is issued. The purpose of DCs is to ensure that private developers contribute to the cost of the municipal infrastructure they will use, e.g. costs of new connections to water, sanitation, roads and electrical infrastructure or other infrastructure services such as roads, schools, parks, library services, and fire and police protection. Proceeds of the DC are then used to finance infrastructure projects such as local roads, street lighting and sewers. The attraction of DCs is that they make urban development pay for itself. DCs also impose fewer negative externalities on existing residents, but instead shift the burden to property developers or new property owners. In addition, as DCs approximate user fees by attempting to equalise marginal social costs to marginal private costs, they are considered efficient (Savage, 2009)

DCs have taken root in many municipal jurisdictions across the world: e.g. Canada (Ontario, British Columbia, and Alberta), Australia, India and USA. In South Africa, DCs in their various forms (e.g. betterment levies, impact fees) have a long history. The former Cape Province started using betterment levies as early as 1935 (Savage, 2009) when it levied 2 per cent on the value of the improvement. Since then, South African municipalities have had various forms of DCs. However, quite surprisingly, South African municipalities have not exploited this revenue source to its fullest, given the potential for additional revenues to finance large capital expenditures. To date these levies hardly go beyond 5 per cent of the value of improvements (Savage 2009; Graham and Berrisford, 2015). Most of DC revenues are collected (60 per cent - 70 per cent) by metros and intermediate cities. DMs and small urban municipalities get negligible amounts from DCs.

Other taxes

Local governments across the globe also impose a mix of small levies, such as advertisement taxes, hotel/occupancy taxes, fire and drought levies, amusement taxes or construction taxes. Hotel or occupancy fees and tourism fees often assume a value added sales tax on the hotel bill. Amusement taxes and advertisement taxes are charged on admission to amusement parks and on the use of sign boards, respectively. Construction taxes are charges for securing a permit to build or sometimes can be a tax on the costs of construction. The fire service fee is a levy often imposed on contracts of insurance or added to property rates. In the former case, it is only paid by those who insure their properties while in the latter case, it is paid by all rate payers. These taxes generate little revenue due to the seasonality of the services being taxed. For rural municipalities tourism levies can be a significant source of income, while urban municipalities benefit from advertisement, hotel and construction taxes.

External new financing mechanisms and financial arrangements

Currently many LGs, especially in the developing world face the near-impossible task of funding their infrastructure investments from existing revenue bases (UN Habitat, 2015). Conventionally capital grants are no longer adequate to finance all the infrastructure needs, thanks to the global downturn in economic activity. New and innovative revenue sources to finance infrastructure projects are giving hope to many struggling municipalities to balance their infrastructure requirements with revenues.

Debt finance continues to be the cornerstone of LG infrastructure financing both in the developing and developed world (UN Habitat, 2015). However, in developing countries debt financing has been low (given the capital requirements) and even declining in some countries. The reasons for low rates of borrowing in particular are many and include capital markets that are underdeveloped and limited credit worthiness among municipalities (UN Habitat, 2015). In addition to new financing arrangements, the literature suggests enhancing the availability of credit. The literature also points to a number of areas that require improvement (both on the demand and supply sides) to make debt financing the first option for infrastructure financing for LG:

- On the demand side there is a need to go back to basics and ensure that the rules and regulations for borrowing are clear and known by local authorities;

- The need for improving credit worthiness for municipalities through promoting transparent budgeting;
- The literature argues for establishing localised credit rating agencies that will regularly monitor the creditworthiness of municipalities as well as ensuring systematic risk-assessment. Credit rating agencies not only ensure fiscal discipline on the part of municipalities, but they also promote the participation of municipalities in credit markets (Alam, 2010).

Table 1 summarises funding options for LG, with selected examples of where the options were implemented indicated in the last column. Alternative financing arrangements discussed in literature and implemented elsewhere in both developing and developed countries are shown in the bottom panel of Table 1.

Table 1: Alternative funding/financing mechanisms

Alternative financing mechanisms	Alternative funding/financing instrument	Examples	Where implemented (countries, cities or municipalities)
New funding sources	New taxes	City congestion tax (tolls, vehicle licensing surcharge)	Barcelona, Chicago, Los Angeles, Madrid, New York, Seoul, Tokyo, Toronto, Buenos Aires, Lima, Mexico City, Santiago, Shanghai, Nepal
		Local business/payroll tax	France, Japan, Germany The United States Italy, Dar es Salaam, Berlin, Chicago, Frankfurt, New York, Seoul, Tokyo, Bangkok, Beijing, Budapest, Guangzhou, Shanghai, Nepal
		Tourism stayover levies/ occupancy tax (Surcharge/ sharing)	Greece, Paris, Barbados
		Personal income tax (surcharge/ tax sharing)	Sweden, Denmark, Norway, Switzerland, Dar es Salaam, Lagos, Cleveland, Copenhagen, Milan, New York, Paris, Rome, Stockholm, Zagreb, Beijing, Bucharest, Budapest, Guangzhou, Mexico City, Moscow
		Corporate income tax (surcharge/ tax sharing)	Mexico City
		Fire levy	
		Local sales taxes (surcharge/ tax sharing)	Mumbai, Bogotá, Manila.
		Property transfer duties (surcharge/sharing of duties)	
		Wealth tax (surcharge tax)	
		Amusement tax, entertainment tax	Nepal Chicago, New York, Seoul, Tokyo Istanbul, Lima, Cairo, Jakarta
		Advertisement tax	New York, Istanbul, Jakarta, Kiev, Manila, Nepal
		Natural resource tax	Indonesia, Nigeria and Russia
		Value capture	Impact fees Common at the local level in the US Land Tax Nepal Development charges Canada Special assessment districts Tax increment financing Some states in USA
	New financing mechanisms	Alternative bonds and debt financing tools	Joint development
Green bonds			
Social impact bonds			Brazil, South Africa
New financial arrangements	Public private partnerships	Design-build	
		Design-build-operate-maintain	
		Design-build-finance-operate-maintain	
		Concession	
	Privatisation	Lease	
	Infrastructure investment funds	Pension funds	
	Infrastructure investment funds	Sovereign wealth funds	
		Private companies (investment banks)	
	Private and non-profit philanthropic partners	Donations	
		Grants	
	Private and non-profit philanthropic partners	Programme investment	
Crowd funding	Donation-based (public good)		

Sources: Bahl, R and Bird, R (2008) Bahl, R, Linn, F. and Wetzal, D. (eds). 2013 Cities Network, 2017; Peterson 2009, UN Habitat, 2015

In summary, the various studies reviewed in this section suggest that there are also diverse sets of alternative revenue instruments for LG. However, it is important to note that their application is heavily influenced by an interplay of many contextual factors

Approach and method

The issue underpinning this study is that South Africa municipalities have a revenue problem. The current revenue sources (transfers, property rates, user fees) cannot match the ever-expanding expenditure needs of municipalities. The key to municipalities delivering on their mandate is that they must have significant sources of own revenue. Intergovernmental transfers are also key to addressing the differences in expenditure needs and fiscal capacities of municipalities. As noted above, systemic shortages in all these traditional revenue sources have necessitated the search for alternative and innovative sources of financing municipalities. The objective of this chapter is to enhance the understanding of the potential of different revenue instruments. To achieve this objective, a three-pronged approach was adopted. The subsequent paragraphs provide brief descriptions of the approach taken in this chapter.

- A survey targeting all 257 municipalities (eight metros, 44 district and 205 local municipalities) was undertaken using a structured questionnaire. The purpose of this survey was to obtain direct feedback on what practitioners in municipal spaces believe could be on the list of alternative revenue sources. The survey also solicited reasons as to why municipalities are not exploiting these revenue sources. The response rate to this survey was 9 per cent as shown in Table 2.

Table 2: Response rates

Metros	38%
Intermediate cities	11%
District Municipalities	11%
Local municipalities (rural and urban)	7%
Average response	9%

Source: Commission computations

- Content analysis of the current literature established alternative revenue sources for LG that have been implemented by other LGs in other countries.

Alternative revenue sources, suggested by practitioners in the LG space and from the current literature, were subjected (following Martinez-Vazquez and Sepulveda, C, 2012) to rigorous testing to evaluate the applicability and potential in the South African context. The evaluation culminated in the scoring and ranking of different revenue sources. The criteria for evaluating different revenue sources is described in Appendix A on page 52.

Findings and Analysis

The potential of alternative LG revenue sources

This section assesses the potential of alternative revenue instruments for LG. It is critical that as the potential of alternative tax instruments is assessed, the current financing challenges and dynamics of different categories of municipalities is kept in mind. The principle of

differentiation is therefore critical in the assessment of the suitability of each alternative instrument. It is important to note that there will always be a group of municipalities that will be dependent on transfers, as their revenue bases will always be limited, and they will hardly be able to pursue alternative revenue sources in any significant way. The majority of rural municipalities fall into this category. On the other extreme, in the case of metros, and intermediate cities with robust and sophisticated economies, if well supported or incentivised, their grant dependency will diminish as they rely more on own revenues. This group of municipalities has the potential to exploit alternative revenue sources. In between these two extremes are many urban local municipalities and district municipalities. Urban local municipalities are diverse and some have well run systems to absorb new revenue sources. DMs, on the other hand, are in a precarious position as they rely heavily on the RSC Levy Replacement Grant, which defies all the principles of a good grant instrument. Districts have the potential to absorb alternative financing instruments as their current portfolio of own revenue sources is very limited or non-existent. However, for districts, the potential of any alternative revenue sources can only be fully tested when their functions are fully understood.

The survey results provide a number of possible revenue instruments. Revenue instruments cited by municipal managers are listed in Table 3.

Table 3: Alternative revenues as suggested by different categories of municipalities

Metros and intermediate cities	District municipalities	Local municipalities
Lease of optic fibre cables and sale of bandwidth	Fire levies	Fees for driver testing grounds
Business tax	Rental fees	Fire levy
Parking lot taxes	Roads fines	Dumping site usage fees
Pooled financing	Mining rights levies	Tourism levy
PPPs	Weigh bridges	Weigh bridge
	Air pollution	Mining rights fees
	Harbour taxes	Parking lot taxes
	Licensing of mortuaries	Street advertising

Source: Commission compilation of survey

From the survey, respondents were asked to list possible reasons or constraints for not levying the alternative revenue sources they have cited. The responses were categorised by municipal category as shown in Table 4.

Table 4: Constraints to levying alternative revenue sources

Metros and intermediate cities	District municipalities	Local municipalities
Onerous process of approval by minister	Prohibitive Legislation	Prohibitive Legislation
Prohibitive Legislation	Lack of capacity	Lack of capacity
	Lack of political will	Lack of political will

Source: Commission compilation of survey

Interestingly, respondents suggest many factors that prohibit them from exploiting alternative revenue sources. Metros point out that they are deterred by the onerous processes of getting approval for the introduction of a new revenue source and the prohibitive legislative prescripts that govern the introduction of new revenue instruments. District and local municipalities cite legislation, lack of political will and lack of capacity on their part to design and get approval for the new revenue sources as the limiting factors. It is not surprising that political will is cited as a factor because the introduction of a revenue source in any setting can be a risk not worth taking for many politicians. Votes can be lost because of a new revenue source.

This list of revenue instruments, including the ones sourced from literature were evaluated against a number of modern public finance principles listed in Table 2 for their potential in the South African LG space. The approach adopted follows that of Martinez-Vazquez (2013) in which the potential of each alternative revenue sources was rated against each of the “good” revenue criteria. For example, a betterment levy is rated for its potential/ability to fit the benefit principle, revenue adequacy, non-exportability. The rating scale has 5 categories: H for High potential; MH for medium to high potential; M for Medium potential; LM for low to medium potential, and L for low potential. A numeric score (ranging from 0 to 4) for each rating letter was then attached. The numeric scores should be interpreted with great care. An example would illustrate how the numeric scores are derived. On revenue potential in the case of a hotel tax, the rating is L as relatively low revenues can be generated from this tax. The numeric score is therefore 0 (zero). For the same tax, compliance costs are relatively low, hence a rating of L. But this latter low rating means hotel taxes are a “good” tax in terms of compliance costs and thus they obtain a numeric score of 4 on compliance costs⁶.

After scoring, the different tax sources were ranked. The different tax instruments and ratings are shown in Table 5 and the non-weighted rankings in Table 6.

⁶ An important caveat is in order here. Although, the scores seek to capture the advantages or disadvantages of each tax instrument, there is no scientific basis of assigning the precise scores within the two extremes, but rather they represent the author’s interpretation and reading of contextual factors. As there is some subjectivity in the scoring, the scores are therefore subject to different interpretations and readings.

Table 5: Potential of different revenue sources

	Revenue potential	Buoyancy elasticity	Mobility of tax base	Potential efficiency costs	Sensitivity to cycle	Adaptability to benefit principle	Even distribution of tax base	Vertical equity/fairness	Costs of administration (by municipality)	Compliance costs	Potential for corruption	Acceptability		Exportability	Local accountability
Business tax	M	H	M	M/H	H	M/H	L/M	M	M	M	M	M/H	L/M	M	M/H
Development charges	M/H	L	M	L	M/H	M/H	M/H	M	M/H	L	M	L	L	M/H	H
Advertisement tax	L	M	M	L	M	M	L	M	M	M	M	H	M/H	M	M
Amusement tax or public amenity levies	L/M	M	L/M	M	M	M/H	L	M	M/H	M	M	M	M/H	M	H
Hotel tax	L	H	M	M	H	H	L	M	L	L	L/M	H	L	H	L
Piggyback natural resource taxes	M	H	L	M	M	M/H	L	M	M	L	M	H	L	H	H
Fire levy	L/M	M/H	L	M/H	L	L	L	L/M	L/M	L/M	M	M/H	L/M	L	M/H
Piggyback income taxes	M	M	M	M	H	M/H	L	M/H	L	M	M	H	L	M	L/M
Weigh in bridge in mining areas	L/M	M	M/H	M	L/M	M/H	L/M	M	M/H	M	M	M/H	L	M/H	H
Royalties	M/H	M	L	L/M	M/H	H	M/H	M/H	L/M	L	M	M/H	L/M	L/M	M
Corporate income tax or profit tax	M/H	H	H	H	H	L	L	H	H	L/M	M/H	H	L	H	L
Parking levies	M	H	L	H	L	H	H	H	L	L	L	H	M/H	L	H
VAT	M/H	H	M	M	M	M/H	L/M	L/M	M/H	L/M	L/M	L/M	L/M	L/M	M
Property taxes	M/H	H	L	L	L	M	M	M	H	L	L	M	L/M	L	H
User fees	M/H	H	L	L	L	H	L/M	H	M	L/M	L	L/M	M	L	H

Table 6: Ranking of conventional and alternative local government tax handles

Type of tax	Points	Ranking
Utility fees	46	1
Property taxes	44	2
Royalties	37	3
Development charges	35	4
Business tax	35	4
Piggyback natural resource taxes	35	4
Piggyback income taxes	34	5
Weigh in bridge in mining areas	32	6
Advertisement tax	31	7
Fire levy	31	8
Amusement tax or public amenity levies	30	9
Hotel tax	27	10
VAT	24	11
Corporate income tax or profit tax	19	12

Source: Commission calculations

The results in Table 5 and Table 6 highlight the fact that no single revenue instrument is able to fulfil all the principles set out in Appendix to chapter 2 on page 52.

The most desirable revenue instrument is therefore the one that closely approximates most of the principles. The rankings in Table 6 suggests that the three conventional revenue sources, i.e. user charges, property taxes and royalties, closely satisfy most of the principles of a “good “LG tax. The traditional revenue sources are closely followed by development charges (DCs), local business taxes and the piggyback taxes. Although DCs are provided for in the Constitution, they remain under-exploited by municipalities in South Africa. The general under-utilisation of DCs is a function of many factors, including the uncertainty and confusion around what they are for, what is their legal basis, or whether it is a tax or charge, and what method of calculation is used (Graham and Berrisford, 2015, National Treasury, 2017). The absence of a DC policy framework has not augured well for the optimal exploitation of DCs. It is important to note that there are significant developments in the area of DCs now, which may see many municipalities exploiting this revenue source. The National Treasury, in consultation with metros is in the process of developing a National Policy Framework on Development Charges. Parallel to the policy development process, the MFPF Amendment Bill is also being developed which, among other provisions, will define DCs, set out the principles for calculation of the DC, and further clarify the reporting and accounting principles of the proceeds from the DC contributions.

The results also highlight the possibility of using a tax sharing (piggybacking) mechanisms to close the sub national fiscal gap. Piggybacking on either individual income taxes or natural resource taxes is gaining popularity in the developed world especially in large cities. Piggybacking on existing revenue streams is both cost effective and easier to implement.

Table 6 also shows that there are other revenue sources that LG can exploit. Examples of such revenue sources include weigh in bridges in mining areas, advertisement levies, fire levies, amusement taxes and hotel taxes. Weigh-in bridges will enable municipalities to recoup part of the costs of infrastructure damages associated with haulage trucks. This revenue instrument could easily benefit rural municipalities. Similarly fire levies can provide municipalities with revenues to deal with veld fires or repair infrastructure damaged as a result of fires. As firefighting is one of the responsibilities of DMs and fires know no boundaries, DMs are better placed to exploit this revenue source, since they overlay a few municipalities.

Table 6 also provides some insight into revenue instruments that fare badly for LG: VAT and corporate taxes. Incidentally, very few countries have used corporate income taxes and VAT in the local sphere.

Potential external financing instruments

South African municipalities are under immense pressure to step up their infrastructure investments. However, resources at their disposal are insufficient to meet the growing demand for infrastructure. The result of a shortfall of funding for infrastructure has been a vertical imbalance on the infrastructure account. There is pressure for the sphere to look beyond current financing arrangements to close this gap. The literature proposes a number of methods to close this gap (Ahmad and Graig, 1997). Debt financing is a common and very efficient method for bridging the revenue gap on the capital account. Although South Africa has one of the best borrowing frameworks, the low uptake of debt finance has been the biggest challenge. Although metros and a few large cities use debt finance, the amounts are low relative to the needs on the ground. Surprisingly the trends in borrowing are also on a downward spiral. Many factors account for this. First, municipalities have not found a reason to participate in credit markets because grant finance has been an easy way out for them. Second, many municipalities cannot participate because they are not creditworthy. Third, lending to municipalities has discouraged many financial houses as it is often seen as inefficient and costly because borrowing levels are often very low. The survey results for this study give more reasons for the low levels of debt finance. In this survey, municipalities noted that there is neither political will nor capacity to pursue debt finance as an option for closing the infrastructure funding gap.

As debt financing is a viable option for closing the revenue gap, there is a need to promote orderly use of this option, especially for metros and large cities that have stronger and more diversified economic bases and large unmet demands for infrastructure. In South Africa it is important to develop LG debt markets by, among other things, improving the credit worthiness of municipalities through:

- Promoting transparency in budgeting and accounting;
- Developing own revenues for LG;
- Incentivising financial intermediaries that serve LG;
- Promoting the pooling of funds by municipalities; and
- Establishing a LG credit rating agency, i.e an independent entity that evaluates the financial condition or creditworthiness of each municipality. Establishing the financial strength of each municipality will enable them to access public or private debt markets.

In addition to improving local credit markets, municipalities need to capitalise on one of their most important assets: land. Land value capture mechanisms are one avenue with which municipalities can finance their infrastructure requirements (see Cities Network, 2017, Peterson, 2009, UN Habitat, 2015). Options under value capture include:

- Acquisition and sale of excess land: A municipality buys land adjacent to some public investment and then sells it later when its value has improved as a result of the public project;
- Betterment levies: These (usually one time) levies/taxes capture the increment value of land as a result of public investment;
- Developer exactions: Property developers are required to install on-site public infrastructure at their own cost;
- Development impact fees: Once off levy charged on approval or on obtaining a permit to build (Burge, 2010);
- Sale or leasing of municipal land: Local authorities sell or lease land that is near new infrastructure and use the proceeds to invest in additional infrastructure; and
- Tax increment financing: A method of capturing the gain in tax revenue from an increase in property value due to public investment.

Finally, LG infrastructure projects can be financed through private public partnerships (PPP). PPP infrastructure projects can take various forms, e.g. the design, finance, build, operate and transfer (DFBOT) projects design, finance and operate (DFO) projects, design, build, operate and transfer (DBOT) projects, equity partnership projects and facilities management projects (National Treasury, 2017) and full privatisation of a function as is done in Brazil (Alm, 2010).

Other innovative revenue mobilisation strategies

The scope for new revenue instruments discussed above to yield any significant revenues in many municipalities is limited because they lack many factors that underpin an effective revenue collection system. Many cannot collect fully the revenue due to them. This is a common problem in rural and smaller urban municipalities. In many instances such municipalities lack the administrative capacity to assess the revenue base, and administrative capacity to enforce the payment of taxes. Some municipalities lack both tax administration infrastructure and human resources to fulfil the basic revenue collection function. Elsewhere in the world, municipalities are establishing semi-autonomous revenue agencies to overcome their capacity challenges (OECD, 2011; USAID, 2012). According to von Haldenwang *et al* (2014) these semi-autonomous revenue agencies exist in more than 50 countries. Some LG revenue administration models have centralised this function at a level where economies of scale in tax collection can be realised. In South Africa, district municipalities have the mandate of supporting municipalities. One area they could do this is in revenue administration by building own capacity to collect and distribute some revenues. This was made abundantly clear by the JB Marks local municipality in our survey. The municipality suggested that “municipalities should be assisted with revenue collection.” One advantage of using the district to collect revenues of municipalities they overlay is that the costs of revenue administration will be lowered through a more efficient use of inputs because of economies of scale in

production, greater specialisation of staff, and building dedicated systems, especially for information and communications technology (ICT).

Towards an alternative funding model for LG

In summary, the preceding analysis indicates that there is a need for LGs to improve their revenue bases by exploiting some of the highlighted revenue sources. However, some revenue sources suit some municipalities and not others. In proposing alternative revenue instruments, and ultimately a new revenue model for municipalities, the process should be guided by the differentiation principle. The 257 municipalities in South Africa are characterised by different economies and revenue bases. Metros and intermediate cities, for example, have stronger economies than rural municipalities. In the long run, the expectation is that if metros are granted more alternative revenue instruments they can rely less and less on transfers from the centre. In this context, metros and intermediate cities need to be granted or incentivised to exploit more alternative instruments. In addition, conditions for getting new revenue sources should be relaxed. On the other hand, for many rural municipalities their revenue base is too limited to sustain their activities, and transfers will always be the mainstay of their fiscal frameworks. Alternative revenue sources will not make a difference for this category on municipalities. To a large extent, rural district municipalities have the same limitation. Figure 5 describes the revenue model for different categories of municipalities. Against this background, and based on theory and practice around the world, and suggestions from survey respondents, Table 7 attempts to allocate the best possible LG structure to levy each of the alternative revenue sources or financing arrangement.

Figure 5: Ideal funding framework for different categories of municipalities

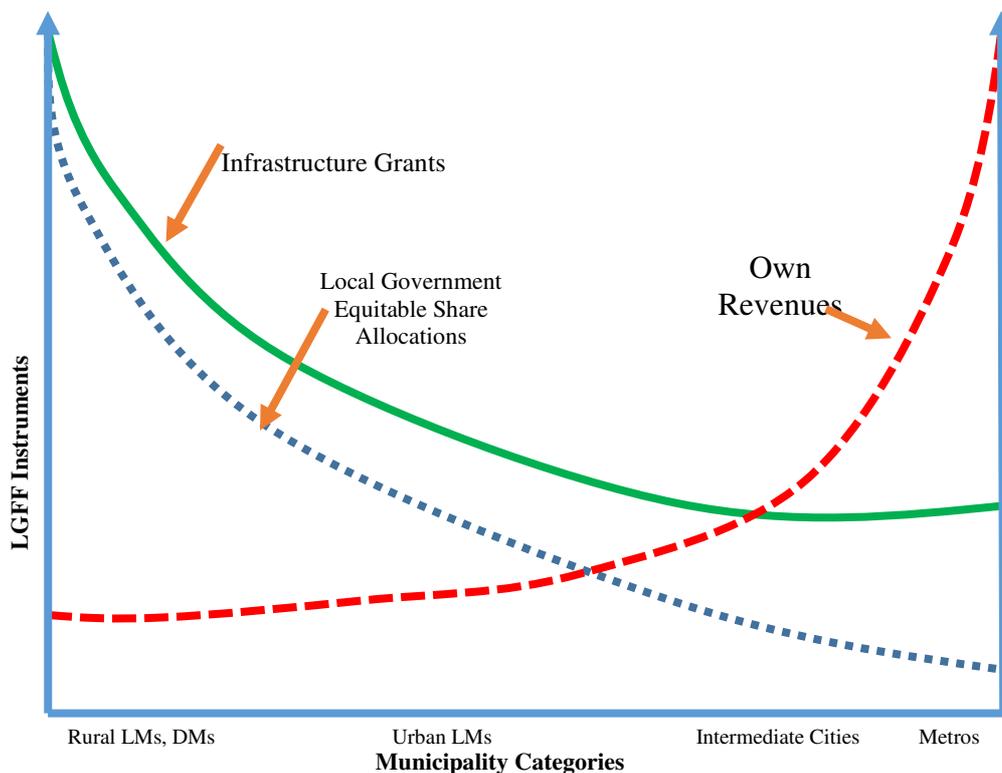


Table 7: Alternative revenue options for each sphere of LG

	Metros	Intermediate cities	Other urban municipalities	DMs	Rural municipalities
Revenue handles					
Development charges	✓	✓	✓		
Surcharge PIT	✓	✓			✓
Local business / payroll tax	✓	✓	✓		
Surcharge natural resource tax				✓	✓
Fire levy				✓	✓
Advertisement tax	✓	✓	✓		
Tourism levies/occupancy tax (Surcharge/sharing)	✓	✓	✓		✓
Amusement tax	✓	✓	✓		
Parking levies	✓	✓	✓		✓
Financing arrangements					
Impact fees	✓	✓			
Tax increment financing				✓	
PPPs	✓	✓	✓	✓	✓

Source: Commission calculations

Figure 5 and Table 7 propose more and higher revenue yielding revenue instruments for metros and intermediate cities, while few and less complex revenue instruments are proposed for rural district and local municipalities.

Conclusion

Local government is a critical sphere in the country’s growth and development process. As it accounts for almost 40 per cent of the country’s GDP, LG requires adequate revenue sources to fulfil its constitutional mandate. In the current economic climate, the sector cannot count on transfers to close its fiscal gap, either on the capital and operational accounts. The ever-increasing expenditure demands facing LG against a backdrop of very constrained revenue streams, requires a review of the LG fiscal framework with a view to introducing additional new revenue streams. The question that has been raised by the sector and government at large is: what alternative instruments have the potential to address the vertical revenue gap of municipalities and further support their fragile economies? The objective of this chapter has been to provide a comprehensive review of alternative mechanisms to fund and finance LG, considering that the sector has been unable to meet its constitutionally assigned mandate because of a severe revenue gap. Elsewhere in this submission, the issue of whether there is some additional fiscal space for municipalities within the context of existing revenue sources and how they can be reformed and improved upon to increase own revenue yields was examined. This chapter evaluates the potential of alternative financial mechanisms for LG. Its ultimate purpose is to provide local authorities and policy makers with the information they need to develop new sources of funding, financing and revenues. In evaluating the applicability of each revenue source, the chapter was guided by two principles: a “no one size fits all” approach with respect to revenue sources, and the principle of differentiation with respect to municipalities. The evaluation concludes that there is an elaborate list of alternative revenue and funding sources that could be positive additions to local revenue mechanisms.

Based on the survey of 257 South African municipal managers, and content analysis of both modern public finance theory and empirical studies, a list of potential revenue sources for LG was drawn and subjected to a rigorous evaluation process. The evaluation process involved testing the potential of each revenue source against a number of public finance principles for a “good” LG revenue source. In short, the chapter isolated development charges, local business taxes, and piggybacking taxes on personal incomes, and natural resource taxes as viable revenue options for LG. These revenue sources rank highly in satisfying the five important criteria for a “good” tax handle, i.e. the principles of efficiency, accountability, transparency, fairness, and ease of administration. Tax sharing in particular is gaining traction as the first stage instrument of closing a vertical gap left by the insufficiency of revenue assignments. A number of levies, including fire levies, amusement and advertisement taxes could be added to the list of alternative revenue options.

The chapter notes that giving LG new revenue instruments may not necessarily solve LG’s revenue problems. Many municipalities are unable to collect fully the revenue due to them for a number of reasons including poor administrative capacity to assess their revenue bases, poor administrative capacity to enforce the payment of taxes, and poor records on tax payers. There is therefore a need for new innovative revenue mobilisation strategies, especially for rural and small urban municipalities. This chapter suggests exploring the use of district municipalities as agents for revenue collection for smaller municipalities that lack capacity. As districts overlay a number of municipalities, there are economies of scale arguments for establishing a revenue mobilisation structure at the district level. As noted above, examples of such arrangements are easy to find elsewhere in the world.

Besides internal revenue alternatives, the chapter reviewed the potential of external financing arrangements. This assessment was informed by the need to find options to close the ever growing infrastructure funding gap. The chapter underscored the importance of developing LG credit markets through, among others, incentivising financial intermediaries to serve LG or incentivising financial intermediaries that will package financial instruments in a way that is accessible to municipalities. It is also important to improve municipal creditworthiness by promoting transparency in budgeting and accounting, and developing own revenues for LG. There is also a need to incentivise the establishment of credit rating agencies for LG as a precondition for the deepening of capital markets for the local sphere. The chapter also noted that many municipalities own massive tracts of land. As the most important asset of municipalities, land should provide a steady flow of income for many local authorities. There are various value capture mechanisms which municipalities should assess and possibly adopt. Furthermore, municipalities need to harness private sector capital to complement their own. In this regard municipalities should actively pursue private public partnership (PPP) deals. On the part of government, it is important that the onerous process of approving PPPs should be streamlined.

Recommendations

With respect to supplementary revenue sources for local government, the Commission recommends that:

- (1) The Minister of Finance should take steps (including piloting) to add the following supplementary revenue sources to the list of allowable taxes for different types of municipalities in a differentiated manner that could include, the development charges, tourism levies, land value capture mechanisms, tourism levies and fire levies. Fire service levies in particular should be considered for the municipalities that are to be authorised for this function. The greater potential for expansion of own revenue sources in urban areas should be compensated for by changes to the division of revenue to increase transfers to rural areas.
2. The Minister of Finance should proactively inform municipalities on various land value capture mechanisms, that municipalities can take advantage of in order to supplement their current own revenue sources.

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Appendix to chapter 2

Principles for a “good” LG tax

Morden public finance literature seems to agree on the criteria for isolating a “good” LG revenue source. There is agreement in literature that policy decisions on economic stabilisation and income distribution are best assigned to the central government, while decisions related to allocative efficiency are best assigned to LGs (Musgrave, 1969). Morden public finance theory agrees that any “good” tax instrument should satisfy the following characteristics: revenue buoyancy, equity, efficiency and political acceptability. However, there are a number of additional desirable properties for local-level taxes (see also Bird, 2000).

Table 8 summarises the main characteristics of a good local revenue instrument.

Table 8: Characteristics of an ideal revenue source/tax instrument

	Characteristics	Details
1	Revenue adequacy	The administrative burden of the revenue source should not outweigh revenue generated.
2	Certainty	Certainty in a revenue system is essential as without it, government and taxpayers can neither budget nor plan effectively. Spending plans by government and consumers should be based on realistic assessments of expected revenue flows.
5	Equity and fairness	The revenue system should be equitable, fair and affordable. A quality tax system should be equitable in the sense of both vertical equity (i.e. taxpayers with different incomes should pay according to their ability to pay) and horizontal equity (i.e. taxpayers in similar circumstances should be treated similarly).
6	Correspondence	The revenue instrument should not be levied on citizens who are not part of the local community or the burden of the revenue should not overlap to adjacent jurisdictions whose citizens do not benefit from the expenditure of the funds
7	Revenue buoyancy	The tax base should be stable in particular during economic cycles. Revenues from a local tax should be buoyant at times of economic growth and less vulnerable to negative turns in the economy
8	Efficiency, economic neutrality and simplicity	A good tax should cause the lowest possible economic distortion and exert minimal impact on the spending and business decisions of firms and individuals. It should not be complex but simple to administrator and easy for the average citizen to understand.
9	Politically acceptable	The revenue system should be sensitive to the historical and institutional framework in the country.
10	Balance and reliability	An effective revenue system should be broad-based, avoid special exemptions and utilize a low overall tax rate with few loopholes.
11	Complementary	The tax systems should recognise the complementary roles of different orders of government and assist in maintaining a healthy relationship between different spheres of government. Each organ of state should be mindful of how its tax decisions impact on another sphere of government.
12	Competitive	The tax system should be responsive to the global competitiveness of a country and its goods and services. It should be used to attract investment and foster economic development
13	Enhances local fiscal autonomy	The sub national government should have as much control over all aspects of the revenue source or tax to improve the lines of accountability with its citizens
14	Limits horizontal fiscal imbalances	The revenue source should not create large imbalances between municipalities

Source: Commission, 2012; Martinez-Vazquez, 2007; SACN, 2018.

Chapter 3:

Rethinking Municipal Taxation and Revenues: Optimising Property rates

Nomfundo Vacu

Introduction

In both developing and developed countries, property taxation is accepted as the most appropriate instrument to promote revenue autonomy at the local level. It also plays a pivotal role in the development of an urban strategy that underpins sustainable growth by facilitating access to credit needed to finance a sustainable urbanization strategy (see Bahl and Linn, 2014 cited in Ahmad *et al*, 2014). Furthermore, regular and efficient administration of this tax is key to local economic development as it ensures financing of government expenditures and development in the short- and long-terms (see Stucere and Mazure, 2014; Martinez-Vazquez and Sepulveda, 2011). According to the OECD (2015), greater use of property taxes would provide a number of benefits, as it is less harmful for growth and can be equity enhancing. A number of other studies such as those by Bird and Slack (2002), among others, have also emphasised the importance of property taxation for LG, stating that it approximates a user fee and is often a progressive tax because much of the burden falls on the owners of land, who tend to be in higher income brackets. It is also viewed as the most stable and reliable source of revenue relative to other taxes; it is difficult to evade since it can be secured by the property: and is more visible and open than other taxes (see Marvin, 2010; Martinez-Vazquez, 2012). In South Africa property taxation has always been regarded as an important municipal revenue source and the main tax for LG. Section 229 of the Constitution, supplemented by other pieces of legislation, allows municipalities to impose rates on property. According to Bell and Bowman (1997) the implementation of property rates in South Africa was also driven by the need to address public infrastructure deficits, especially in former black local authorities. In the White Paper on Local Government, property taxation is regarded as a major source of discretionary own revenue for LG, and a tool that can enable the sphere to function effectively (Department of Constitutional Development, 1998).

The effectiveness of the property tax system in South Africa however, has been questioned by many, as some municipalities are experiencing challenges in fully utilising and efficiently administering this revenue source. Although revenues from this instrument have been growing over the years, its growth has been declining and stagnant in some cases (see National Treasury, 2018). Furthermore, relative to other revenue sources, property taxes have been the lowest contributor to municipal own revenues (see National Treasury, 2018). The lower contribution of this revenue source has led to a significant increase of grant reliance in some of the municipalities in South Africa. Estimates from National Treasury (2017) show that on average, property taxes contribute only 10 per cent of total municipal revenue, and 17 per cent of municipal operating revenues. However, the picture varies in different municipal types, as

some municipalities are more reliant on grants and have a lower revenue base than others. According to National Treasury (2017), more than 30 per cent of local municipalities in South Africa finance more than 50 per cent of their operational budgets through intergovernmental transfers. Furthermore, approximately 40 per cent of non-metropolitan municipalities finance more than 75 per cent of their operating expenses through intergovernmental transfers. In his LG 2016/17 report, the AGSA (2017) indicated that 31 per cent of South African municipalities reported significant deficits emanating from their inability to collect debt and their inability to pay creditors. During this period, debt accounted for 33 per cent of own revenues in metropolitan municipalities, 64 per cent in secondary cities, and 66 per cent in other local municipalities (National Treasury, 2017). The high levels of debt in municipalities point to lack of debt management capabilities in the municipalities. Poor debt collection has dire effects on service delivery, as municipalities (in terms of legislation), are expected to fund a larger share of their budgets from their own revenues.

Many studies have noted that municipal finances in South Africa are crippled by, among other factors, poor financial management and budgeting, lack of administrative capacity, weak accountability systems, low municipal tax bases, ineffective revenue collection systems, poor governance, weak internal controls and risk management, supply chain management challenges, inaccurate evaluation of municipal tax base, and high levels of non-revenue water and electricity (Brand, 2016; National Treasury, 2017; SALGA, 2016). Although some of these factors are external, many originate from inside the municipalities and indicate revenue collection inefficiencies. In the light of the issues discussed above, the study seeks to identify constraints to municipal revenue collection with a particular focus on property rates. The main question asked in this chapter is whether municipalities are putting enough effort in collecting own revenue from their existing property tax capacity and what are the constraints (if any) of doing so. This is with a view to finding ways through which this revenue source can be optimised.

Objective and scope of the chapter

The objective of the chapter is to examine constraints to property tax collection in South African LG. More specifically, the study seeks to

- Asses the current performance of property rates in South Africa;
- Quantify municipal tax effort with a particular focus on property rates;
- Examine constraints to property tax collection; and
- Identify possible ways through which property rates can be optimised.

The hypothesis tested in this study is:

- Municipalities are not efficient in property tax collection; and
- Municipal property tax revenues are stagnant due to institutional and socio-economic factors.

Property tax in the South African LG fiscal framework

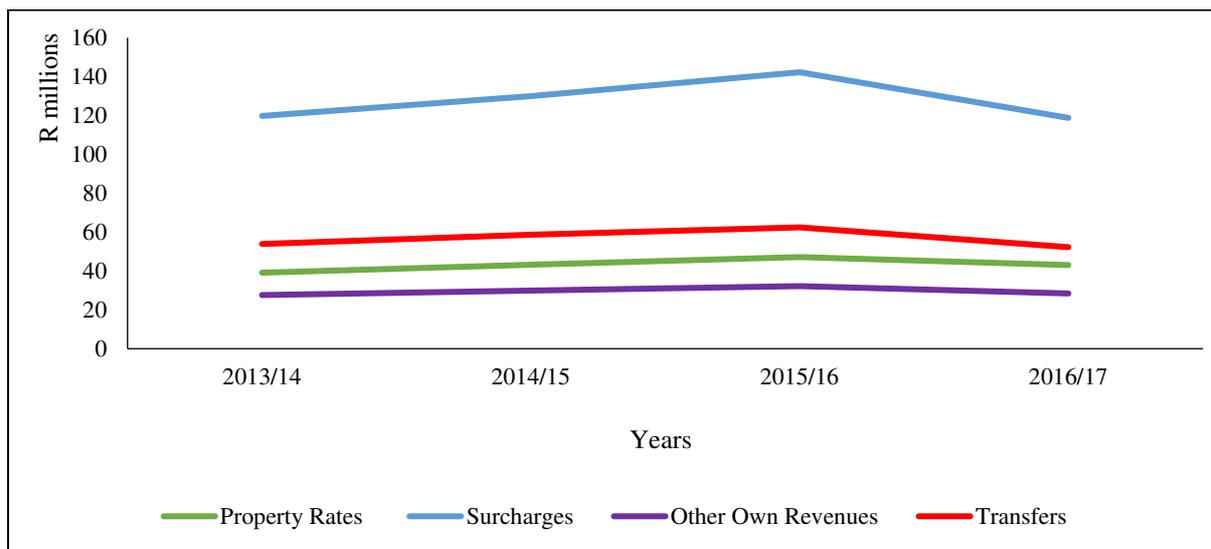
Property taxation is an important component of LG revenues in South Africa. During the apartheid period, property tax collection was generally high and well received, in part because

residential owners enjoyed generous rebates and the substantial profits generated from the provision of electricity and water made up for the loss of income (see Kihato and Berrisford, 2006 cited in De Visser, 2013). In the White Paper on Local Government of 1998, the Department of Justice and Constitutional Development (1998) also recognised the importance of this revenue source and the need to improve its implementation. In terms of sections 214, 227 and 229 of the Constitution, LG is entitled to an equitable share of revenue raised nationally to enable it to provide basic services and perform the functions allocated to it. It may also receive other allocations from national government revenue, either conditionally or unconditionally. Section 229 allows municipalities to impose rates on properties in their respective areas and surcharges on fees for services provided by or on behalf of the municipality. Municipalities are also required in terms of section 64 of the Municipal Finance Management Act, 2003 (Act No. 56 of 2003) (MFMA) to ensure that they have effective revenue collection systems and maintain a management, accounting and information system. The implementation of property taxation in South Africa is regulated through the Local Government: Municipal Property Rates Tax Act, 2004 (Act No. 6 of 2004), which makes provision for municipalities to implement a transparent and fair system of exemptions, reductions and rebates through their rating polices and a uniform framework for regulating the rating of property throughout the country. In terms of this Act, property rates are levied on immovable property, which includes residential, agricultural, industrial, business and commercial, multiple use, public service infrastructure, vacant land and unauthorised or illegal development or use. This tax is based on property values. The Act states that municipalities must develop their own property rates policy, and the policy should be reviewed on annual basis.

Property rates performance

Municipal operating revenues consists of intergovernmental transfers, revenues from property rates, surcharges and other revenue sources. On average, property rates account for 17 per cent of the total operating revenues and remains the lowest contributor, relative to surcharges and government transfers (See National Treasury 2018). Figure 6 shows revenues from different sources over time.

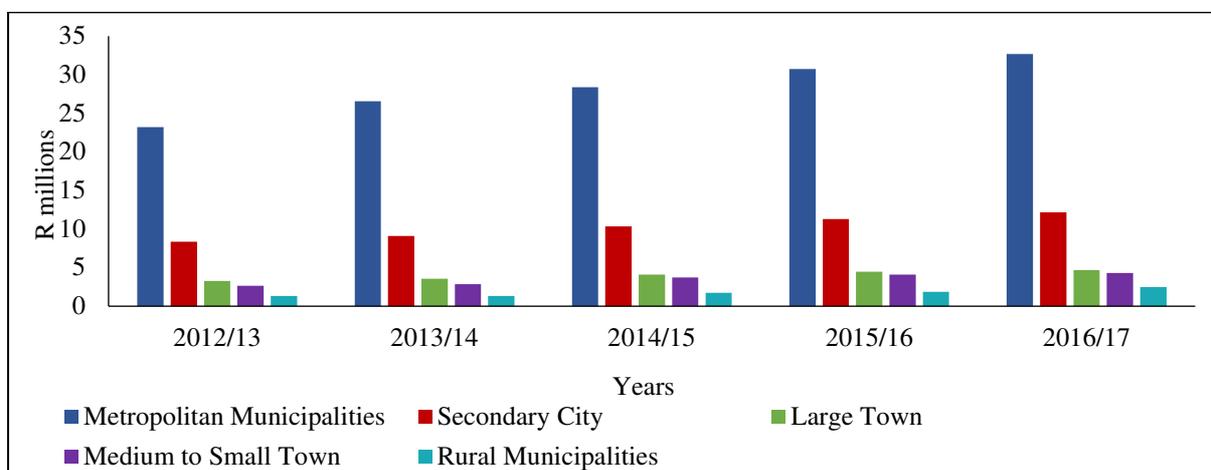
Figure 6: Property rates vs other operating municipal revenue sources



Source: National Treasury (2018)

Over the period from 2013/14 to 2016/17, municipal revenues from all sources have been generally increasing, with revenues from surcharges being the highest, followed by intergovernmental transfers. It is clear that property rates remain the lowest across all the years, despite being the main tax for LG. Furthermore, these taxes experienced a decline over the last two years from R47 billion to R43 billion. Figure 7 shows property rates in different municipal types over the period from 2013/14 to 2016/17.

Figure 7: Property rates by municipal type



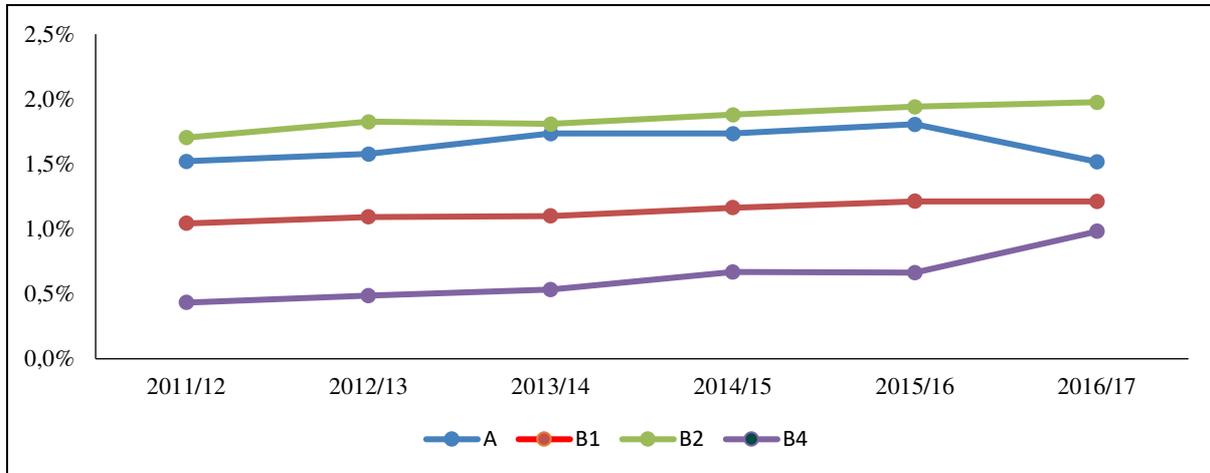
Source: National Treasury (2018)

Revenues from property rates appear to have been increasing across all five municipal types. However, there is a huge gap between the different categories⁷. As Figure 7 shows, and as expected, metropolitan municipalities (category A) collect the most in terms of property rates, followed by secondary cities. Rural municipalities are found to be collecting the least. Figure

⁷ Different municipal categories are: A (metropolitan municipalities), B1 (intermediate cities), B2 (large towns), B3 (small towns) and B4 (rural municipalities).

7 also shows that in large towns, revenues have been decreasing over the years. Figure 8 presents the ratio of property rates to municipal gross value added (GVA) by municipal group.

Figure 8: Property tax as a share of gross value added (GVA)



Source: National Treasury (2018)

Across all the municipal groups, there appears to be no significant correlation between property tax and local economic activities. Property rates account for 1.2 per cent of GVA on average, and less than 2 per cent across all the municipal groups. The importance of property rates varies across the different municipal types. It is apparent that in large towns, property rates are an important component of the economy and their importance has gradually increased over time, while in metropolitan municipalities a decline is observed in the last two years.

Property rates in South Africa are calculated based on the market value of the property. In other words, changes in the market value of a property should lead to a change in property taxes. Figure 9 presents the indexed property price against property taxes.

Figure 9: Property rates and property prices (annual growth rates)



Source: Easy data Quantic, 2018

As Figure 9 shows, property prices and property rates have been generally moving together over the years. However, property prices appear have increased at a faster rate than property rates. Estimates from Quantec (2018) show that on average, property prices have been increasing at 13 per cent, while property rates increased at 8 per cent. According to Ntinyiso Consulting (2017) the misalignment between property rates and property prices could be due to delays in the valuation roll and property rate updates.

Literature review

This section presents a literature review on basic principles for property rates, internal and external factors affecting property tax collection and options on how LG can optimise property taxes.

Principles of property taxation

Property taxation has a long history and is used in both developing and developed countries as a source of revenue for sub national governments. This tax is implemented in a complex environment in which institutional, cultural, political, and economic variables interact in order to determine the economic effects of certain tax instruments, and their feasibility as policy tools (Sepulveda and Martinez-Vazquez, 2012). According to Youngman (1997) cited in Cesare (2012), the liquidity problem of owners lacking the ready cash to make tax payments is also a major concern, as property tax requires payments independent of income flow, and cash-poor owners can lose their properties if they cannot keep up with their tax bills. While property taxation should take into consideration a number of factors, there are key basic principles that the property tax should adhere to, namely, equity, effective administration and adequacy, efficiency, and transparency (see Sepulveda and Martinez-Vazquez, 2012; Cesare, 2012).

- *Equity* refers to equal treatment of taxpayers. According to Ploeg (2008) tax equity is guided by two principles, namely, the “benefit principle” and the “ability to pay” principle. The benefit principle states that those who benefit from the services provided by a tax should be the same as those responsible for paying the tax, and the amount of individual tax paid should approximate the individual benefits received. The ability to pay principle, on the other hand, states that tax is equitable if it is linked to the income or wealth of individuals. In other words, taxpayers with higher income levels or greater wealth should bear a greater burden (Sepulveda and Martinez- Vazquez, 2012). Cesare (2012) argues that the “ability to pay” principle creates inequalities as it leads to systematic differences in assessment for groups of properties defined by value.
- *Efficiency* means that a tax should be designed in a manner that does not distort the allocation of resources in the economy. According to Ploeg (2008), when government expenditures are financed through taxation, there is a risk of misallocating public resources. In the case of Canada, differential rates are applied on different categories of properties. Ploeg (2008) also argues that the design of this tax is not informed by the need to capture the variable costs of providing municipal services and infrastructure to these properties.
- *Effective administration and revenue adequacy* suggests that the administering property tax should be cost effective and should avoid duplication. Administrative costs reduce the share of revenue collected to finance service delivery (Martinez-Vazquez, 2012). Furthermore, a

tax should raise a significant amount of revenue relative to the cost of collecting and the expenditure needs of a government unit.

- *Transparency in property tax* can reduce tax evasion so there is a need to have widespread provision of information to citizens, disclosure of assessment practices and results, and accurate information on the uses of property tax revenues. Public participation in local revenue and expenditure decisions, along with public relations programmes, can also improve fiscal accountability (Ploeg, 2008).

Constraints to and challenges of property tax collection

Lessons from other countries

Bahl and Smoke (2003) cited in Dada *et al* (2017) state that one major administrative problem experienced by several councils is their inability to fully collect property taxes due to internal factors such as poor capacity. Agbesi and Osei-Owusu (2014) confirmed this in a study on the challenges and constraints to property tax collection in Ghana. Using qualitative research methods, they found that property tax collection in Ghana has not been stable, because municipalities do not have comprehensive registers of taxable activities. Furthermore, it was found that there were no systems to track invoices and payments. The study also pointed out issues of manual handling of information on revenue collection as one of the challenges, arguing that it encourages fraud, abuse and revenue loss. In a study on property rating potential and hurdles in Ghana, Kuusaana (2015) also indicated that poor property data systems, political interference, non-enforcement of the law, a low budget deficit in financing revaluation, insufficient staffing, insufficient technical capacity of the few staff available at the municipal valuation, lack of awareness and rating divisions are the key constraints to property tax collection in Ghana.

In Nigeria, Adedokun (2012), Dada *et al* (2017) also found that property tax collection in municipalities is negatively impacted by issues such as the inability of municipalities to attract and retain qualified tax administrators, the high reliance on intergovernmental transfers, avoidance of tax by the private sector, financial mismanagement, poor revenue collection systems, a lack of proper records, and corruption.

Using the Stochastic frontier method, Postali (2015) also found that in Brazil, oil royalties have negative effects on municipal tax effort.

Fjeldstad (2016) carried out a similar study in Sudan and the results suggested that the inefficiencies in revenue collection are due to factors such as lack of accountability in government, lack of political will, weak institutional and administrative capacity, lack of incentives for both revenue collection and enforcement, lack of policy to show good use of tax proceeds, informal payments, and corruption. The argument is supported by the findings in Tiwari (2017) who examined factors affecting revenue management in the public sector in the case of the Halaba Special Woreda Town Administration in Ethiopia, using qualitative methods. The study took into consideration factors such as budgeting, collection methods and management tools and techniques. The findings showed that incorrect assessment of revenue sources, poor planning, lack of full automation, and poor implementation of revenue rules, regulations and procedure, lack of database management, lack of awareness in taxpayers,

attitudinal problems and lack of commitment of revenue officers are major constraints to tax collection.

Using a descriptive research method, Nduda *et al* (2015) examined the effects of competence of revenue clerks and tax compliance on optimal revenue collection for Kenya. The findings confirmed that competence of revenue clerks and tax compliance have a significant effect on optimal tax collection. Furthermore, the study found that the lack of understanding in municipalities and communities also negatively impact on the effort of municipalities in collecting property taxes. Comrie (2012) found that Australian municipalities are reluctant to collect property taxes due to the uncertainty within LGs and their communities as to whether council rates are a tax or a fee for service. Franzsen (2017) pointed out that inappropriate policies, weak administration and unwillingness of governments to enforce laws are the main reason why African municipalities are unable to optimise revenues from property taxes.

Lessons from South Africa

In the case of South Africa, there are a number of challenges that are general to municipal own revenues and those that are specific to property rates. According to SALGA (2011), property rates collection in South Africa is negatively affected by non-payment by government departments. SALGA argued that changes in government policies affect the way government treats payments for rates and services. Furthermore, it was found that the ability for municipalities to split the bills varies across the country municipalities are also unaware of transformation of national and provincial government post elections and the changes are not effected into billing systems. There is also a problem with the timing of billing and payments in relation to the financial years of government, asset registers are not updated in government and are not aligned to municipal property valuation rolls. Furthermore, there is lack of coordination and alignment of national government in municipal valuation rolls, there are no effective systems of communication between national and provincial levels and LG. A study by Ayele (2009) showed that the low property rates revenues can be due to the new culture of non-payment called “withholding rates”. This study found that communities consider the link between property rates and quality of services provided by a municipality to be important. They therefore withhold rates as a way of expressing their dissatisfaction with the perceived inadequate service delivery by municipalities. The Cities Network (2015) argued that the inability of municipalities to levy property rates on traditional land is one of the key constraints and a number of municipalities have lost revenues due to this. Furthermore, the report showed that incorrect pricing and lack of payment enforcement are the key drivers of poor property rates collection.

Optimising property tax collection

Olayaole (2008) cited in Nduda *et al* (2015) argued that revenue generation can be increased by facilitating arrangements between the council officials and the traditional rulers on how to collect community rates and involve traditional rulers through the head of the villages and their chiefs to assist in the collection of the tax on behalf of LGs. Furthermore, to improve the administration of the property tax, municipalities need to develop a database system for collection, which will be used to generate invoices and send them via mail to the customers, and keep payment records. There should also be a comprehensive register of all taxable

activities or levies in municipalities (see Agbesi and Osei-Owusu, 2014; Slack, 2016). Atakpa *et al* (2012) also stated that to boost own revenue generation (including revenues from property tax), municipalities should exploit revenue sources to the full, modify the laws on own revenue generating sources, develop new areas of own revenues, minimise corruption and inefficiencies, and establish prevention and detection methods for revenue mismanagement. Municipalities could optimise property rates collection by increasing the frequency of proper property valuation, by using fixed charges, providing clear guidance and identifying the constraints on the use of differential rates (Comrie, 2012). Furthermore, in order to optimise property tax collection, there is a need to improve legislative frameworks and guidance. In their report on the challenges and prospects of property taxation in Africa, Franzsen (2017) argued that without effective collection and enforcement there is little to be gained from increasing base coverage and property valuations.

Methodology

The study employs both qualitative and quantitative methods. The qualitative method includes case studies of a representative sample of South African municipalities, while the quantitative analysis is carried out through a twofold statistical method. In the first stage, the study computes efficiency scores as a measure of municipal tax effort. This is done using a non-parametric method called the data envelopment analysis (DEA). In the second stage, the model employs the Tobit analysis in identifying constraints to optimal tax collection.

The DEA Method

The DEA method is used to measure the relative behaviour of different decision making units in which the presence of many inputs and outputs make it difficult to undertake a comparison of their performance (Charnes and Rhodes, 1978). This method was first introduced by Charnes *et al* (1985), who suggested a linear convex structure method to the estimation of the production frontier and assumed constant returns to scale. The DEA can be used as a mathematical linear programming method by minimising weighted input with weighted output equal to one (Jacobs, 2001). With this method, productivity is measured as a fraction of outputs over inputs (Ajibefun, 2008). It can be estimated in two forms, namely, the input-oriented and the output-oriented approaches. The output-oriented approach assumes fixed inputs, with the objective to maximise output. The input-orientation considers the output to be fixed so that the input can be adjusted in order to maximise efficiency (Meher and Sahu, 2016). The DEA method can be used with the assumption of variable returns to scale (VRS) or constant returns to scale (CRS). The VRS model assumes that the decision making units are not scale efficient, while the CRS model assumes that decision making units are scale efficient. In this case, VRS output oriented DEA models is employed. This is because the main aim of this study is to find ways through which municipalities can optimise property rates, without necessarily expanding their revenue capacity. In other words, the study assumes a fixed revenue capacity and a variable property rates revenues.

Following Mullarkey *et al* (2015), the output-oriented VRS model for each decision making unit is specified as follows:

$$\text{Max; } DMU_i = \beta_i = \frac{\sum_{r=1}^n U_{ri}Y_{ri}}{\sum_{j=1}^m X_{ji}Z_{ji}} \dots\dots\dots (1)$$

$$\text{Subject to } DMU_i = \beta_i = \frac{\sum_{r=1}^n U_{ri}Y_{rk}}{\sum_{j=1}^m X_{ji}Z_{jk}} \leq 1; k = 1 \dots\dots\dots s \dots\dots\dots (2)$$

$$U_{ri}X_{ji} \geq 0; r = 1, \dots\dots\dots n; j = 1, \dots\dots, m;$$

Where n is the output produced, m is the input employed, β_i is the efficiency measure of the *i*th decision making unit. Y and Z are the output and input values, respectively, while U and X are the coefficients to outputs r and inputs j, respectively.

Tobit analysis

The second stage examines constraints to tax effort. To achieve this, the study employs the Tobit regression method, which measures the impact of selected environmental factors on the achieved efficiency scores. The Tobit model is specified as follows:

$$y_{it}^* = x_{it}^* \beta + \varepsilon_{it} \dots\dots\dots (3)$$

$$y_{it} = \begin{cases} y_{it}^* & \text{if } y_{it}^* > 0 \\ 0 & \text{if } y_{it}^* \leq 0 \end{cases} \dots\dots\dots (4)$$

Where y_{it}^* the achieved technical efficiency is a score for municipality *i*, x_{it}^* is a vector of the potential explanatory variables, β is the vector of the unknown parameter; and ε_{it} is the error term.

Definition of variables

Sampaio de Sousa (2011) emphasised the importance of both supply and demand factors for municipal tax collection. The supply factors are those that are mostly associated with tax capacity, while demand factors are those associated with revenue collection effort. Since the study aims to measure the latter and its constraints, the focus is on the demand factors. Quantifying municipal tax effort requires factors measuring the amount of resources used for tax collected and the amount of revenue collected. These factors are used as input and output variables, respectively. According to Simab (2009), including more variables can increase the efficiency of an inefficient utility and very large number of variables could make all the utilities efficient and can compromise the robustness of the results. It is therefore important to include relevant and significant variables when designing the efficiency model. In this study the inputs are measured using capital spending, gross value added, number of employees and employee cost. Capital spending is used to measure capital investment; this is an important variable because it has been found that other than affordability, the willingness of consumers to pay for property rates depends on their satisfaction with other services provided by municipalities (Nitisol Consulting, 2017). Gross value added (GVA) is used as a proxy for existing municipal tax capacity. The number of employees measure the collection capacity, while employee cost measures administrative cost. In terms of the output, the study used the actual revenues collected from property rates.

The estimated constraints to municipal tax effort include disposable income, unemployment, and transfers from national government, access to basic services, share of formal and traditional households, proportion of the population over the age of 65, and institutional capacity.

Results

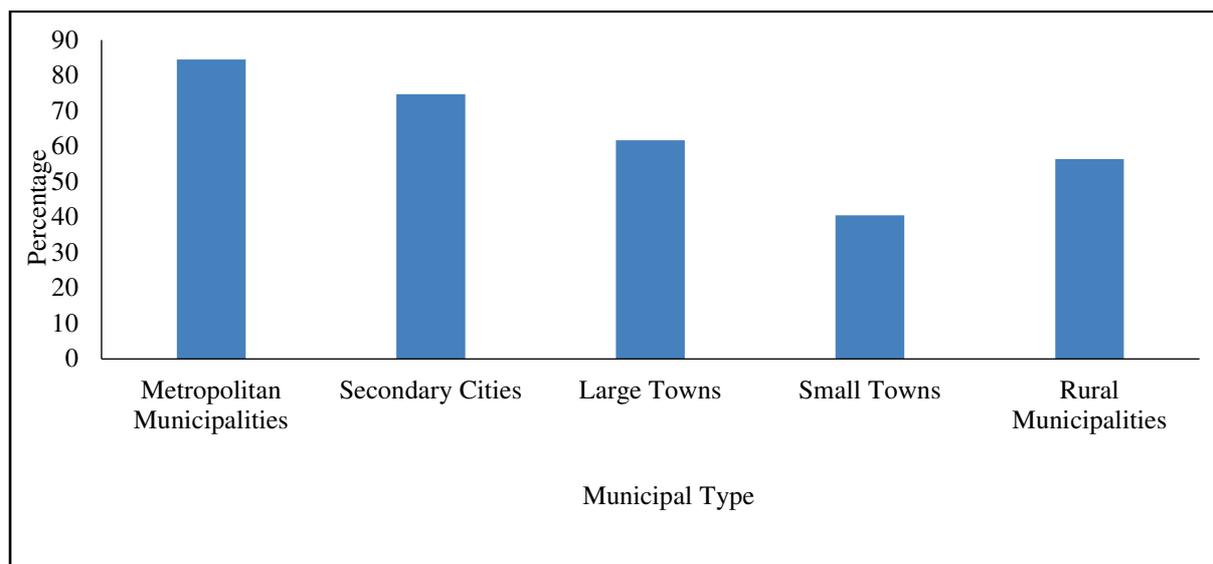
In this section the results from both the qualitative and quantitative analysis are presented. The first part provides a discussion of the quantitative analysis, while the second part provides the results of the qualitative analysis.

Quantitative analysis

DEA results

The tax collection effort is quantified for each municipality in the sample using the DEA method. The results are in the form of efficiency scores, where a municipality with a score of 1 (100 per cent) is regarded as efficient in collecting revenues from property rates, while a municipality with a score that is less than 1 is regarded as inefficient. Figure 10 shows the achieved average scores (tax effort) by municipal type

Figure 10: Fiscal effort by municipal type



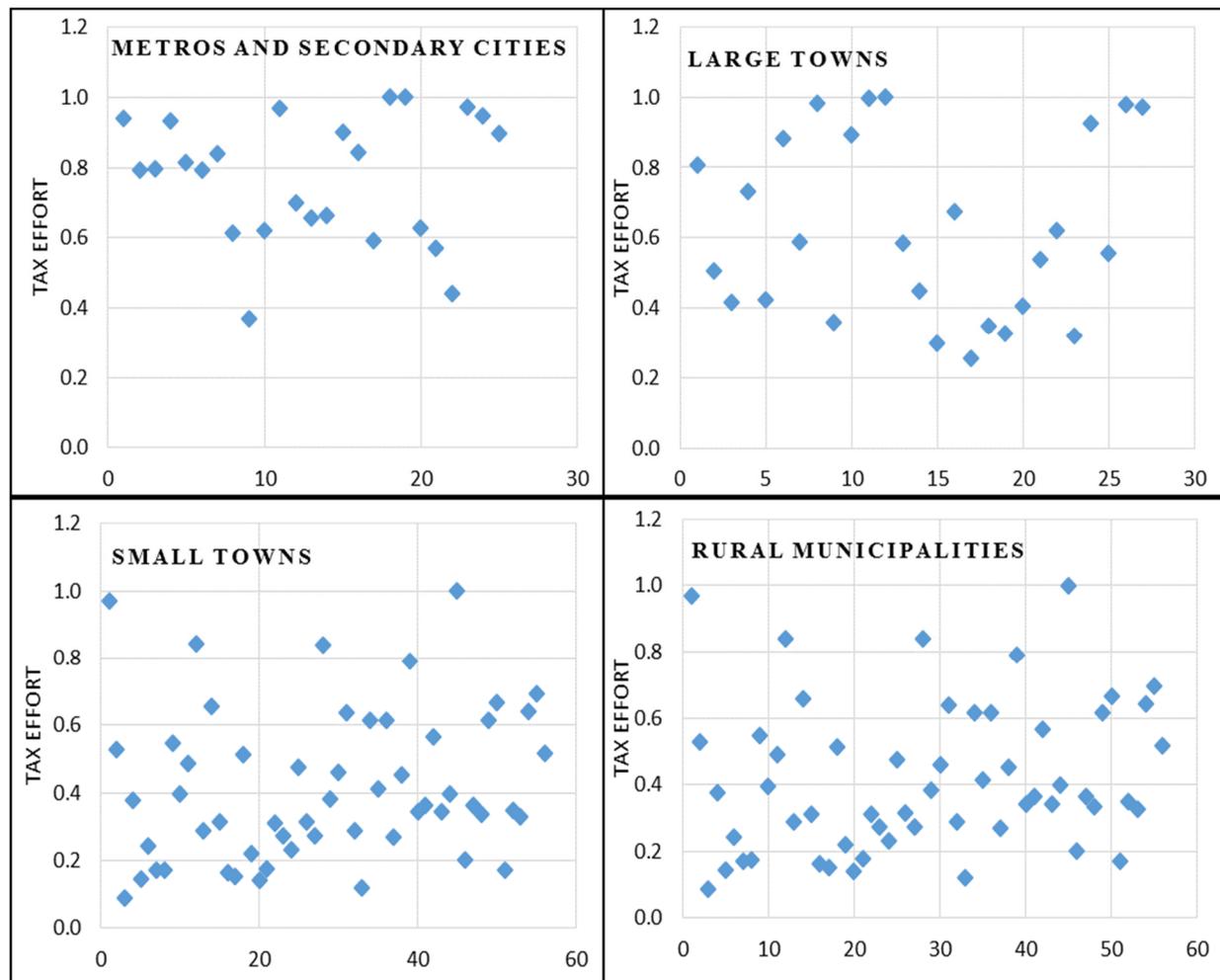
Source: Commission computation

The results confirm that on average, none of the municipal groups have an efficiency score of 1, which implies that none of the groups is fully utilising the property tax revenue source. As expected, metropolitan municipalities are the most efficient followed by secondary cities and large towns, while small towns are found to be the least efficient followed by rural municipalities. As Figure 10 shows, small towns and rural municipalities are only collecting 40 per cent and 56 per cent respectively of what they are supposed to collect given their property tax bases. In other words, these municipalities can still collect 60 per cent and 44 per cent more revenue respectively, without expanding their property tax base. Figure 11 further illustrates municipal tax effort for individual municipalities in the different groups.

The findings show that metropolitan municipalities, secondary cities and large towns (combined) are performing relatively well in collecting revenues from property taxes, as the

majority of the municipalities achieved efficiency scores that are above 50 per cent (Figure 11). In metros, all the municipalities are collecting above 60 per cent of what they are supposed to collect. However in secondary cities, two municipalities, Mbombela and Rustenburg are collecting only 40 per cent of their property tax base. In large towns, 10 out of 27 municipalities are collecting between 30% and 40 per cent of the property tax base. In the case of small towns and rural municipalities, it is clear that the tax effort is very low, as most of the municipalities are collecting less than 50 per cent. Rural municipalities such as Amahlathi, Blue Crane Route, Laingsburg, Mohokare, Intsika Yethu and Senqu are found to be the lowest in terms of collecting municipalities as they only collect 10 per cent of what is expected given their property tax base. The municipalities in this group are predominantly small towns.

Figure 11: Tax effort by municipality



Source: Commission computation

Having found that municipalities are not optimising property taxes, the study further examined the constraints to municipal tax effort by estimating the determinants of municipal tax effort using the Tobit regression method. The results on the determinants of tax effort in different groups of municipalities are presented in Table 9.

Table 9: Determinants of efficiency by municipal type

Explanatory variables	Metros	Secondary cities	Large towns	Small towns	Rural municipalities
Disposable income	0.01**	0.03	0.02**	0.02***	0.04
Unemployment	-0.18**	-0.15***	-0.40*	-0.09*	0.08
Formal housing	0.54	1.29***	-0.43	0.20	0.37
Traditional housing	0.08	-0.66***	-2.74	0.51	-0.63*
Basic services	-0.49	1.18***	-1.39	0.27	-0.90
Capacity	0.09	-0.01**	-0.03***	-0.01*	-0.05
Transfers	0.36**	-0.20***	-0.14	-0.20***	-0.11*
Population above 65	-0.83	12.32	3.03	0.63	0.24
Constant	2.69	2.51	4.30	0.99	1.29

Source: Commission computation

The findings confirm that the determinants of municipal tax effort vary depending on the municipal group tested.

- In metropolitan municipalities, disposable income, unemployment and intergovernmental transfers are the key determinants of municipal tax effort. Income and intergovernmental transfers are found to have a positive effect, while unemployment has a negative effect. The findings show that:
 - A 1 per cent increase in income and transfers leads to a 0.01 per cent, and 0.36 per cent increase in municipal tax effort respectively;
 - A 1 per cent increase in unemployment leads to a 0.18 per cent decrease in municipal tax effort.
- In the case of secondary cities, the findings showed that municipal tax effort is positively determined by formal housing, and access to basic services, but negatively affected by unemployment, lack of administrative capacity, traditional housing and intergovernmental transfers.
 - A 1 per cent increase in formal housing and access to basic services leads to a 1.29 per cent and 1.18 per cent increase in municipal tax effort respectively.
 - A 1 per cent increase in unemployment, lack of administrative capacity, traditional housing and transfers leads to a 0.15 per cent, 0.66 per cent, 0.01 per cent and 0.20 per cent decrease in municipal tax effort respectively.
- For large towns and small towns, the results show that municipal tax effort is positively influenced by disposable income, but negatively influenced by unemployment and lack of administrative capacity. In both groups:
 - a 1 per cent increase in disposable income leads to a 0.02 per cent increase in municipal tax effort.
 - A 1 per cent increase in unemployment and lack of administrative capacity leads to a 0.4 per cent and 0.03 per cent decrease in large towns and a 0.09 per cent and 0.01 per cent decrease in small towns respectively.
 - Intergovernmental transfers have a negative effect on tax effort in small towns. A 1 per cent increase in this variable leads to a 0.2 per cent decrease in municipal tax effort.

- In the case of rural municipalities, traditional housing and intergovernmental transfers are found to be negative drivers of municipal tax effort.
 - A 1 per cent increase in these variables leads to a 0.53 per cent and 0.11 per cent decrease in municipal tax effort, respectively.

Generally, the results confirm that disposable income, unemployment, intergovernmental transfers, capacity and traditional land are the key determinants of municipal tax effort, and their effect can be summarised as follows:

- *Disposable income* is found to be a positive key driver of municipal tax effort in metropolitan municipalities, large towns and small towns, but has no significant effect in secondary cities and rural municipalities. The significance of this variable implies that lower income levels can be a constraint to municipal tax effort, as consumers may not be willing to spend their limited income on property rates, but would rather spend on basic items.
- *Unemployment* appears to be a constraint to municipal tax effort across all the municipal groups except for rural municipalities. The insignificant effect of this factor in rural municipalities can be explained by the fact that municipalities are unable to enforce payment due to issues of traditional leadership. Similarly to the disposable income factor, unemployment is key to the ability of consumers to pay property rates. So in areas where unemployment rates are high, property rates collection is low.
- *Intergovernmental transfers* are found to have mixed effects on municipal tax effort depending on the municipal group tested. The variable is found to be a positive driver in metropolitan municipalities, while it is a negative determinant in secondary cities, small towns and rural municipalities. The positive effect of transfers on municipal tax effort suggest that municipalities should spend transfers on improving the provision of municipal services and property tax administrative processes such as billing systems, which has a positive effect on the willingness of consumers to pay property taxes. However, the inverse relationship implies that municipalities tend to be reluctant to collect own revenues and prefer to rely on government transfers. The negative relationship between municipal own revenue collection and intergovernmental transfers is a common finding in previous studies on this subject.
- *The capacity variable* accounts for the effect of poor administrative capacity to collect revenue. As expected, this variable is found to have a negative effect on municipal tax effort in secondary cities, large towns and small towns, while it has no significant effect in metros and rural municipalities. These results imply that poor administrative capacity can be a constraint to efficient collection of revenues from property rates, as it may lead to poor billing processes.
- *The variable on traditional households* is used to measure traditional land in each municipality. This variable is found to be a constraint to property rates collection because municipalities are unable to levy property rates in areas controlled by traditional leaders.

Qualitative analysis

For the qualitative analysis, the study used a questionnaire to collect data on the challenges and constraints to the property rates collection effort. The questionnaire was sent to a group of 21 municipalities which is 10 per cent of the total population. This includes metropolitan municipalities and local municipalities. From the sample, 15 municipalities have responded so far, and the results are highlighted in this section. Both urban municipalities and rural municipalities are represented in the sample.

Efficient use of existing tax base and collection capacity

The findings confirmed that all the participants have privately owned properties on which they can levy property rates. However, the collection effort and capacity vary in the different groups of municipalities. The findings confirmed that in urban municipalities, the available property tax base is being efficiently utilised, and the collection effort is good. On the other hand, rural municipalities confirmed that in their areas the existing tax base is not being efficiently use, and the collection effort is poor.

Constraints to property tax collection

The municipalities indicated that there is a large number of internal and external factors that negatively impact on their ability to optimise property tax collection. The issues are interrelated and can be categorised as: poor billing and credit control systems, affordability and willingness to pay, areas under traditional leadership and land invasion, and poor institutional capacity

- *Poor billing and credit control systems:* A number of municipalities identified poor billing and credit control systems as one of the major constraints to municipal tax effort. They indicated that the failure to correctly bill consumers and to even bill them can be attributed to various factors. The respondents highlighted the unreliable data and unavailable data in some instances as a major cause of inaccurate billings for property rates. Also, one of the municipalities indicated that the manner in which valuations are conducted has a negative effect on the ability of municipalities to correctly bill consumers, as the bills and tariffs applied on properties are based on valuation rolls. The municipalities indicated that in most cases, valuations are done on a sample of properties and are not comprehensive, and this leads to disingenuous data. Furthermore, some municipalities indicated that they do not have the correct information to inform the billings and collection due to delays at the deeds office. Another key issue that the participants highlighted was that municipalities find it difficult to enforce payment in areas supplied by Eskom, as they have no enforcement tool in those areas. The respondents highlighted the unwillingness of Eskom to assist municipalities with disconnections in those areas. The biggest impact of this is that even if a municipality has an effective credit control policy, it cannot be applied when the municipality is not responsible for the enforcement instrument.
- *Affordability and willingness to pay:* The respondents highlighted the issue of affordability as a hindrance to municipal tax effort. They indicated that in some cases consumers are willing to pay but cannot afford to do so, while in other instances consumers can pay but are not willing to do so. Affordability and willingness to pay is driven by a number of factors, which some municipalities highlighted in their responses. Two of the key issues

which affect affordability are income levels and economic activities. The respondents indicated that consumers do not pay because the rates are too high for their income levels. On the other hand, low levels of economic activity lead to low income levels, high poverty levels and unemployment, which makes it impossible for consumers to prioritise the payment of property rates. In some instances, consumers can afford to pay but are not willing to do so, due to dissatisfaction with the services provided by the municipality, incorrect invoices and lack of awareness about the benefit of paying for property rates.

- *Areas under traditional leadership, political will and land invasion:* The sampled municipalities indicated that they are unable to bill areas where land is controlled by traditional leaders. They indicated that municipalities do not have a record of the properties falling under these areas because property owners do not submit building plans and have no formal title deeds since they acquire land from traditional leaders. With regards to land invasion, the respondents indicated that they are unable to bill unregistered properties.
- *Poor human resource capacity:* The participants highlighted lack of capacity as one of the key constraints to municipal tax effort. Some of the municipalities indicated that they do not have the required human resource capacity to do proper and reliable valuations. Some also emphasised poor administrative capacity.

Ways to optimise property rates

Participants in the sample indicated three key areas that need to be addressed in order to enable municipalities to optimise property rates collection:

- Municipalities are unable to enforce payment in areas supplied by Eskom, and to address this, Eskom needs to sign service delivery agreements with municipalities in terms of the Municipal Structures Act, so that municipalities are able to use electricity as a credit control measure;
- Respondents emphasised the need to support local businesses in order to boost the local economy and create employment.
- One of the major internal constraints to property collection effort is the lack of institutional capacity and poor billing systems. To address this, municipalities should be capacitated through training. Furthermore, the issue of poor billing systems can also be addressed by correctly recording the required information.

Conclusion

The main aim of this study was to measure municipal tax effort and examine its constraints, with a particular focus on property tax collection in the South African LG over the period from 2013/14 to 2016/17. To achieve this, the study used both the quantitative and qualitative methods. For the quantitative analysis, the DEA method and Tobit analysis were applied on a sample of 151 municipalities. For the qualitative analysis, a questionnaire was sent to 22 municipalities, including both metros and local municipalities.

The findings from the quantitative analysis confirm that property taxes are not optimised in South African municipalities. The results confirmed that the inefficiencies are relatively high

in rural municipalities. Metropolitan municipalities, secondary cities and large towns are the most efficient, collecting 84 per cent, 75 per cent and 62 per cent of the expected revenue respectively. On the other hand, small towns and rural municipalities were the least efficient, collecting 40 per cent and 56 per cent of the expected revenues from property rates respectively.

The results further confirmed that property tax collection depends on various factors, as well as on the type of the municipality. In metropolitan municipalities, tax effort is driven by disposable income, unemployment and intergovernmental transfers. In secondary cities, unemployment, formal housing, traditional housing, access to basic services, capacity and intergovernmental transfers are the key drivers of tax effort. The findings showed that disposable income, unemployment and capacity are the key determinants of tax effort in the case of large and small towns. Intergovernmental transfers are also found to be a key driver of tax effort in small towns. The findings confirmed that the property tax collection effort in rural areas is influenced by traditional housing and intergovernmental transfers.

The results from the qualitative analysis correspond with the quantitative results. Property tax collection is high in urban municipalities, but low in rural municipalities. The findings confirmed that poor billing and credit control systems, affordability and willingness to pay, traditional leadership, and lack capacity are the key drivers of poor property tax collection in municipalities.

Recommendations

With respect to optimising traditional own revenue sources, the Commission recommends that:

4. The Minister of CoGTA, in consultation with the President of SALGA should ensure that the credit control systems of Eskom and municipalities are aligned by means of an MOU, and that Eskom assists municipalities with credit control via electricity disconnections within the municipality's area supplied by Eskom;
5. Provincial governments facilitate the process of municipalities in the same district municipality pooling their resources to attract qualified property valuers, where there is a need do so in order to ensure that properties are accurately valuated, and to share the costs associated with the valuation process;
6. The Minister of CoGTA, in consultation with the Minister of Finance and provincial governments should assist local municipalities to build capacity for property rates collection.

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Chapter 4

Analysing Municipal Debt in South Africa

Poppie Ntaka

Introduction

The global financial crisis of 2008 and the recession that followed had a significant impact on South Africa. In the aftermath of the crisis, economic growth has remained relatively subdued, with real gross domestic product (GDP) growth of under 2 per cent being projected for 2018 and 2019, which falls short of the targets envisaged in the National Development Plan (NDP) (National Planning Commission, 2011). Alongside this, the persistently high levels of unemployment, poverty and inequality continue to be key challenges to the country's development, particularly because the economy is not growing at a sufficiently high rate to address these challenges. For instance, in the second quarter of 2018, the unemployment rate reached 27.2 per cent (National Treasury, 2018).

At the LG level, the financial crisis has reinforced the issues around the financial health of municipalities mainly because it has had a direct impact on their sources of revenue. Following the recession, the cost of bulk electricity supply increased significantly, which resulted in businesses reducing their electricity consumption because electricity prices were too high (Steytler and Powell, 2010). The increase in electricity prices also resulted in households being unable to afford to pay their electricity accounts, especially because many households experienced a decline in their income owing to the increases in unemployment (Steytler and Powell, 2010; Commission, 2015). The reduction in electricity consumption by businesses and consumer non-payment have resulted in municipalities having cash flow problems that also affect their ability to meet their own debt obligations and deliver basic services in line with their constitutional mandates.

The fiscal health of municipalities is intricately related to their ability to provide and expand access to basic services. According to McDonald (2017) there are four lenses through which the fiscal health of municipalities can be assessed, namely: (a) ability to meet short-term financial obligations; (b) ability to meet budgeted financial obligations within a fiscal year; (c) ability to meet long-term financial obligations; and (d) ability of municipalities to finance the provision of legally mandated basic services (McDonald, 2017:2).

Based on the above assessment criteria, the current state of finances across numerous municipalities in South Africa reflects their dire financial health. From a revenue perspective, municipalities are performing poorly. While there is no agreement over the precise municipal debt figures, where, for example, municipalities might report a different amount to that of their creditors, the size of the debt still warrants concern. As at the end of September 2017, municipal consumer debt, which refers to the non-payment of property rates and fees for the delivery of

municipal services, amounted to R143.6 billion (National Treasury, 2017a). This is equivalent to 41.9 per cent of total municipal operating revenue and is greater than the quantum of intergovernmental transfers to the LG sphere on an annual basis. Households (70.8 per cent) account for the bulk of the amount owed to municipalities, followed by government departments which account for 5.7 per cent of total non-payment (National Treasury, 2017a). In addition to constraining the ability of municipalities to deliver basic services, non-payment affects the cash balance of municipalities and their ability to pay their creditors. The ability of municipalities to pay their creditors has been deteriorating over the past ten years - between 2008/09 and the second quarter of 2017/18, outstanding debt has roughly doubled (National Treasury, 2018). During the 2017/18 financial period alone, municipal debt increased by 40 per cent (Mail and Guardian, 2018). As at 31 December 2017, the total long-term outstanding debt of municipalities stood at R68.1 billion (National Treasury, 2018). Currently, bulk electricity makes up the bulk of the total creditors with the top ten defaulting municipalities owing Eskom close to R10 billion, which is followed by bulk water with municipalities owing water boards close to R7 billion (National Treasury, 2018; Mail and Guardian, 2018).

Problem statement

A high debt burden, both in terms of what is owed to municipalities and what they owe to creditors is cause for concern. Non-payment by debtors (also known as municipal consumer debt) can serve to reinforce unsustainable levels of debt that are currently faced by municipalities. In particular, growth in the number of outstanding debtors contributes to municipalities not being able to maintain positive cash flows to pay their creditors timeously (National Treasury, 2017b). Such cash flow problems redirect funding away from core service delivery areas that benefit the poor, thus ultimately impacting the ability of municipalities to fulfil their constitutionally mandated responsibilities (FFC, 2011).

Non-payment of municipal creditors can have consequences for the achievement of broader developmental goals. The potential for this is illustrated by the existing high levels of outstanding payment by municipalities to Eskom. Should Eskom make good on threats to interrupt the power supply of municipalities, businesses would be adversely affected, which in turn impacts negatively on job creation and broader economic development. Furthermore, non-payment of municipal debt can result in state-owned entities incurring ratings downgrades. To this end, municipalities with precariously high debt profiles, both in terms of what they are owed and what they owe, pose a significant risk to fiscal sustainability.

Given the central role that municipalities play in the delivery of basic services, especially to indigent households, prudent debt management is a critical factor in ensuring that LG is able to fulfil its developmental mandate. Addressing the current dilemma around municipal debt is critical if the public finances and ultimately service delivery performance of municipalities are to be renewed.

For the purposes of this paper, the focus will be limited to the following aspects of municipal debt:

- Municipalities defaulting on loans;
- Non-payment of municipal creditors;

- Non-payment of statutory duties (for example, South African Revenue Service (SARS) and pension funds); and
- Non-payment by municipal debtors.

Against this background this chapter investigates how municipalities can enhance revenue management by focussing on better debt management. The chapter will focus on how municipalities can strengthen debt management through investigating what can be done to alleviate the challenges of consumer non-payment and defaulting on payments by municipalities.

In 2010/11, the Commission investigated municipal consumer debt. The analysis found that, when controlling for variances in the number of municipalities reporting on consumer debt in each year and averaging out the figures across those reporting, aggregate municipal consumer debt had declined significantly between 2004 and 2009. This chapter is an update of that analysis, and will also expand on it by looking at the debt issue more holistically through the inclusion of non-payment by municipalities.

Objectives of the study

The objectives of this chapter are to:

- Profile municipal debt from the perspective of non-payment by municipalities as well as non-payment by consumers;
- Investigate the drivers of non-payment of municipal debtors and creditors;
- Examine the risks or implications of municipal debt for the intergovernmental fiscal relations (IGFR) system in South Africa; and
- Make recommendations on how municipal debt can be better managed.

Literature review

A brief historical overview of municipal defaults

The history of municipalities defaulting on their debt obligations can be traced as far back as the 19th century. Historical evidence suggests that the incidence of municipal default tends to be heightened during times of economic crises. Cohen (1989) who looked at the recurring themes and key patterns that explain municipal default in the United States, found that the worst municipal default rates were experienced during the four major depressions of 1837, 1873-79, 1893-99 and 1929-37. While the nature and the extent or the severity of municipal default that occurred during these major depressions differed across sectors and regions, a common recurring theme was that, prior to each depression, there was a period of economic expansion which was accompanied by large increases in municipal borrowing. For instance, between 1840 and 1870, state and municipal debt more than tripled, with municipal debt making up the bulk of this increase (Cohen, 1989; Dove, 2016). The high levels of debt accumulated by municipalities were mainly intended to finance improvements in public infrastructure such as railways, canals, water, electricity and sewer infrastructure (Cohen, 1989; Dove, 2016). However, given that during times of economic crises most of the projects had to be abandoned as they proved not to be financially viable or the completed projects did not generate the returns that had been envisaged, many municipalities found themselves unable to meet their debt obligations, which resulted in them defaulting (Cohen, 1989; Dove, 2016;).

Cohen (1989) further notes that across all the depression years, municipalities that had a higher probability of defaulting were those municipalities which had been the largest borrowers in the years that preceded the economic downturn.

Similarly to other periods of economic crisis, the more recent global financial crisis of 2008 also negatively impacted on municipal credit markets across the world. This is evident in countries such as the United States and Italy, which saw an increase in the number of municipal defaults following the Great Recession (Gregori and Marattin, 2015; Tudela *et al*, 2012). In the United States, between 1970 and 2007, municipal defaults stood at 1.3 defaults per year on average and rose to an average of 5 defaults per year between 2008 and 2013 (Moody's, 2014). In Italy, between 2000 and 2009 municipal defaults were on average 1.1 per year and increased to 3.7 per year between 2010 and 2012 (Gregori and Marattin, 2015). Notwithstanding the common trends that are associated with municipal default in times of economic crises, Tudela *et al* (2012) observe that between 1970 and 2016 recovery rates for defaulting municipal issuers have generally been high (averaging 66 per cent) over this period. This observation seems to suggest that there are certain reforms that can be effected that can assist municipalities to recover from defaults but there needs to be an understanding of the key drivers of municipal defaults so that appropriate policy responses can be made.

The drivers of municipal defaults

Moral hazard

One of the drivers of non-payment by municipalities relates to the problem of moral hazard⁸, where LGs may have incentives to not meet their debt obligations because they perceive that they will be bailed out by national government in the event that they default (Black *et al*, 2015). Pettersson-Lidbom (2010), who empirically tested this moral hazard problem using Swedish LGs as a case study, found that, on average, over 20 per cent of existing Swedish municipal debt can be attributed to municipal bailout expectations.

Selective defaulting

Selective defaulting is another reason that explains why municipalities do not repay their debt. This refers to municipalities choosing to default on certain types of loans first. For instance, Gao *et al* (2017), who in their study investigated the borrowing and defaults of LGs in China, found that municipalities choose to default on commercial bank loans first and tend to be opposed to defaulting on central development bank loans. This selective defaulting is often politically motivated, where politicians may want to maintain good relationships with the bank, since it could assist them with securing loans in the future (Gao *et al*, 2017). Selective defaulting can also refer to municipalities making the decision to prioritise other obligations over debt repayments. This type of selective defaulting was evident in the case of the Cardinal local school district in the United States, which intentionally defaulted on its debt payment and chose to prioritise paying employee salaries instead, mainly because it was experiencing cash flow problems (Tudela *et al*, 2012). Another example of this type of defaulting is the case of

⁸“Moral hazard occurs in a situation where the actions of one party with respect to a contract cannot be monitored by the other party or parties to the contract. This permits opportunistic behaviour on the part of the party whose actions are hidden, to the detriment of the other less informed parties.” (Black *et al*, 2015)

the Baldwin County in the United States, which used the available funds it had to pay for its operating expenses instead of servicing its debt. This resulted in the county defaulting on two series of general obligation bonds (Tudela *et al*, 2012).

Common pool problem: The impact of the amalgamation of municipalities

Notwithstanding some of the potential economic benefits that are associated with the amalgamation of municipalities, there can be costs that are attributable to opportunistic political behaviour, which may give rise to the common pool problem⁹. For example, prior to being amalgamated, some municipalities may be incentivised to increase their debt because they know that once the reform is effected the costs will be shared with the new municipality. (Tyrefors, 2006). The implication of this is that even if costs are shared, there is a risk of the merged municipality facing financial pressures that could result in them defaulting. Empirical evidence of the common pool effect is mixed. Tyrefors (2006), who empirically tested for the common pool problem by using the amalgamation of Swedish municipalities as a case study, found strong evidence of this effect, where some municipalities accumulated debt in anticipation of there being a merger. By contrast, Jordahl and Liang (2010), who also used the Swedish municipalities as a case study, found no empirical evidence of the common pool problem.

Unanticipated costs

Unanticipated costs is another factor that can contribute to municipal default (Cohen, 1989; Tudela *et al*, 2012). An example of this is the case of the Washington Public Power and Supply System (WPPSS), which defaulted on its revenue bonds amounting to close to \$2.25 billion (Tudela *et al*, 2012). Cohen (1989) and Tudela *et al* (2012) reviewed municipal default in the United States, which used WPPSS as one its first case studies. They found that apart from a declining demand for energy, the high interest rates of the early 1980s resulted in the nuclear projects that the WPPSS had undertaken being more costly than initially anticipated (Cohen,1989, Tudela *et al*, 2012). In addition, the unanticipated costs were as a result of the system facing construction delays and cost overruns that increased the cost of completing the nuclear projects and forcing the system to cancel two of these projects (Cohen,1989, Tudela *et al*, 2012).

Fiscal health of municipalities

The fiscal health of municipalities has a direct bearing on the probability of them defaulting in the future (Spiotto, 2013). McDonald (2017) observes that fiscal health can be assessed by using various measurement systems such as a ratio analysis and systems that are reliant upon an index. McDonald (2017) cautions against using a measurement system that relies on an index, as unique information tends to be lost when data is indexed. Gregori and Marattin (2015) who empirically investigated the determinants of Italian municipal defaults, and Holian and Joffe (2013) who empirically tested the default probability of California's cities, both employed a ratio analysis in their respective studies using similar fiscal indicators. Both studies found a positive and statistically significant relationship between the municipalities' debt service ratio and the likelihood of defaulting (Gregori and Marattin, 2015, Holian and Joffe, 2013). This

⁹ "The common pool problem arises in situations where the costs of an activity which benefits a small group are shared among a wider group." (Jordahl and Liang, 2010)

implies that as municipalities' debt levels increase relative to available revenue, a default becomes likely owing to the fact that they would have insufficient resources to meet their debt obligations. In addition, the studies found that changes in available resources, as measured by the year-on-year revenue changes, influence the probability of a municipality defaulting (Gregori and Marattin, 2015; Holian and Joffe, 2013). This suggests that if revenues fall significantly municipalities may be unable to pay off their debt and deliver on their public services. The two main findings emerging from these studies can be supported by the case of Dowling College in New York, which defaulted mainly as a result of weak operating performance (in 2014, the net operating income was only enough to cover 50 per cent of the college's annual debt payments) and a poor liquidity position (12 days cash on hand in 2014) (Tudela *et al*, 2012).

Other factors

According to Cohen (1989), Spiotto (2013) and Tudela *et al* (2012), other determinants of municipal default are:

- Financial mismanagement and fraud;
- Poor project and resource management;
- Politics;
- Off-balance sheet liabilities; and
- Unaffordable and unsustainable personnel costs that draw on limited resources.

Lessons from other countries in addressing municipal defaults

Table 10 outlines some lessons that can be drawn from other countries that have faced issues related to municipal default and bankruptcy and fiscal distress in general. In particular, it shows various debt management reforms that have been used to assist fiscally distressed municipalities in restoring the functioning of their credit markets.

Table 10: Summary of reforms used to assist fiscally distressed municipalities

Mechanism/reform	Case study/country	Description
Bailout	Mexico's sub national government: policy response to 1994-1995 Tequila crisis	Bailouts to Mexico's sub national governments assisted them to restore their functioning and ability to deliver on services. However, the bailout induced the moral hazard problem where after the end of the one year relief programme, sub national governments incurred deficits in anticipation of being bailed out
	Germany's local government:1991-1994	Evidence from Germany's municipalities highlights that bailouts are almost hard to avoid in transitional periods, especially after there have been significant changes to the federal system.
Debt restructuring	Mexico's sub national government: policy response to 1994-95 Tequila crisis	One of the shocks that Mexico's sub national governments faced during the crisis was a sharp increase in interest rate that resulted in them being unable to service their debt. The debt restructuring mechanism (90 per cent of outstanding sub national debt was restructured) contributed to lowering the interest rate; however, structural fiscal imbalances remained. A challenge with this mechanism is that it gives rise to the collection action problem; the conflicting interests of the municipality and the creditors may make it hard for them to reach a mutual agreement.
Rainy day funds	Mexico's sub national government: policy response to 2008 financial crisis	This crisis resulted in sub national governments being unable to meet the debt obligations because of lower capacity. The rainy day funds were used to smooth the shock and many states were able to avoid defaulting
Municipal safeguards	United States' municipalities	<p>Municipal safe guards refer to the following mechanisms:</p> <ul style="list-style-type: none"> • Procedural safeguards on issuing of debt; • Outright prohibitions on the issuing of debt above a specified limit; • Binding tax limits based on a percentage of assessed property values; and • Hard budget constraints. <p>Empirical evidence of the effect of municipal safeguards on the likelihood of municipal default reveals that outright prohibitions on the issuing of debt and hard budget constraints reduce the likelihood of municipal default, while binding tax limits and procedural safeguards increase it.</p>
Enhancement of financial mobilisation and management capacity	Dar Es Salaam	To address massive debts accumulated over many years due to poor collection levels and to assist in improving revenue collection, the whole city's financing system was reviewed and the yield potential of existing sources and revenue were assessed so as to rationally determine new rates, charges or fees

Source: Compiled from various studies by Revilla (2013); Schwarcz (2001); Dove (2016); Seitz (1999); Spiotto (2013); Mosha (2010)

Municipal consumer debt

This section highlights the drivers of municipal consumer debt. It focuses on non-payment by households, government departments and businesses.

Reasons for non-payment by households

One of the key determinants of non-payment by households is the inability and willingness or unwillingness to pay. The inability to pay is often a result of poverty, where beyond a certain level of income, municipal services become unaffordable for households (Booyesen, 2001, Botes and Pelsler, 2001, Burger, 2001). By contrast, the willingness or unwillingness to pay cuts across all income levels, which implies that non-payment is not only limited to lower-income households but it can also include higher-income households (Fjeldstad, 2004, Booyesen, 2001). The willingness or unwillingness to pay and the resultant non-payment of municipal services is closely associated with the level of unhappiness or dissatisfaction that consumers may experience with respect to poor service delivery (Glaser and Hildreth, 1999; Fjeldstad, 2004).

Non-payment by households can also be as a result of municipal performance issues such as the absence of billing and metering systems. The lack of metering systems and incorrect billing, owing mainly to customer or data information not being updated regularly, can serve to overstate municipal consumer debt, where for instance, paying customers, indigent households or deceased debtors are regarded as defaulters (FFC, 2011). Furthermore, it can reinforce consumers' unwillingness to pay.

Reasons for non-payment by government departments

The main reasons for non-payment by government relate to weak administrative or financial management practices. A study conducted by the Commission (2011), which investigated the causes of municipal consumer debt in South Africa, found that when the devolution of assets and the payment of property rates was relocated from the national Department of Public Works to its provincial counterparts, poor planning contributed to bottlenecks in payments to municipalities.

Furthermore, the study found that non-payment by government departments could be attributed to slowness in generating invoices or property schedules; inaccurate verification and reconciliation from other municipalities; and inappropriate billing systems (FFC, 2011).

Other external factors that contribute to non-payment include unreasonable interest rate charges that affect the government departments' ability to pay, and reforms in particular sectors or sphere that may give rise to negative spill-over effects in other sectors or spheres (FFC, 2011).

Reasons for non-payment by businesses

The main reasons that contribute to non-payment by businesses are similar to the reasons that drive the non-payment or late payment by households and government departments. These include: irregular and incorrect billing, dissatisfaction with the service provided, and high tariffs, which may render services unaffordable (BUSA, 2011, cited in FFC, 2011).

Other reasons that contribute to non-payment by businesses relates to the issue of theft, administrative bottlenecks and ageing infrastructure. For example, the Transmission Company of Nigeria (TCN) was unable to pay its debt due to energy theft, vandalism and the fact that its infrastructure and equipment to produce and distribute the required energy was obsolete,

because these challenges impacted negatively on profitability and revenue income (Oosthuizen *et al*, 2018).

A review of measures or mechanisms that enforce payment and improve the recovery of costs

Table 11 provides a review of measures that can be used to enforce payment or to recover costs.

Table 11: Summary of measures to enforce payment or recover costs

Mechanism/Measures	Case study/country	Description
Collection of debt handled by private collection agencies	United States(New York, Miami and Chicago)	Private collection agencies handle the collection of debts for parking tickets and library fines. Compliance is more likely with this approach as it can lead to consumers being blacklisted
Disconnection of services	South Africa (Eskom)	Consumers are encouraged to pay for services to avoid being disconnected. The disconnection of services can occur in different forms: <ul style="list-style-type: none"> • Shutting off services through removal of cable and pipes; • Increase reconnection fees; • Consumers required to pay outstanding debt before being reconnected; and • Self-disconnecting by prepaid meter.
Cross-subsidisation		This approach involves wealthier households being charged higher tariffs so as to subsidise the services of less affluent households.
Prepaid meters		Prepaid meters are regarded as a cost-recovery mechanism, where consumers have to pay for their service prior to using it

Source: Compiled from various studies by Spencer (2006), Ruiters (2002)

Research methodology

The research will employ a multi-pronged approach.

- First, to contextualise and profile municipal default and municipal consumer debt, a descriptive analysis will be conducted. The secondary data that will be used for this analysis is sourced from National Treasury’s municipal data portal. The analysis covers a seven-year period (2011/12-2017/18). Ideally, a longer time period should be covered so as to assess municipal debt trends prior to and after the 2008 global financial crisis. However, due to data unavailability and demarcation changes that occurred in 2006 and 2011, the period was limited to 2011/12 to 2017/18.
- Second, to complement the descriptive analysis as well as to confirm the trends that emerge from the analysis, a web-based questionnaire was administered. A combination of close-ended and open-ended questions were used to examine the reasons behind growing municipal debt and to establish whether municipalities have effective internal controls to address the debt problem. The questionnaire was distributed via email to

municipal managers (MMs) and chief financial officers (CFOs) across all nine provinces to 21 municipalities.

- Third, based on the findings from the descriptive analysis and web-based questionnaire, face-to-face and telephonic interviews were conducted with selected municipalities so as to get a better understanding of some of the institutional issues that lie behind the municipal debt problem. To ensure a representative sample, stratified random sampling was used for each category of municipality (A, B and C). A proportional allocation technique was used to ensure that the sample size of a stratum (category) is representative or proportional to the number of elements (in this case municipalities) present in the stratum.

Overview of municipal debt in South Africa

This section provides an overview of municipal debt from the perspective of what is owed by municipalities and what is owed to municipalities.

Non-payment of municipal creditors

The ability of municipalities to pay their creditors has remained poor over the period 2011/12 to 2017/18. This is reflected in the positive real annual average growth rates for municipal debt across the various municipal categories as shown in Table 12. For the period under review, the real annual average growth rate for secondary cities (22.9 per cent), large towns (30.1 per cent) and small towns (39.0 per cent) municipalities is above 20 per cent. For metros (3.3 per cent) and rural municipalities (19.9 per cent), growth has been positive but below 20 per cent.

As shown in Table 12, between 2013/14 and 2018/19, the proportion of the outstanding municipal debt to operating expenditure has been growing steadily. With the exception of metros and rural municipalities, which experienced a decline between 2016/17 and 2018/19, there is a rising trend across all the other municipal categories. Notably, in 2018/19 the outstanding municipal debt as a proportion of operating expenditure for small towns (39 per cent) and secondary cities (23 per cent) is quite high, which means that the rising costs associated with servicing debt in these municipalities may serve to threaten the sustainability of the operating budget.

Table 12: Real year-on-year growth in outstanding debt per municipal category, 2011/12-2017/18

Real-year-on-year growth	2011/12-2012/13	2012/13-2013/14	2013/14-2014/15	2014/15-2015/16	2015/16-2016/17	2016/17-2017/18	Real annual average growth rate, 2011/12-2017/18
Metros(A)	-13.9%	7.8%	14.7%	10.4%	12.2%	-11.4%	3.3%
Secondary cities (B1)	20.4%	13.2%	12.2%	59.1%	13.9%	18.4%	22.9%
Large towns (B2)	45.4%	8.7%	42.1%	27.9%	15.9%	40.7%	30.1%
Small towns (B3)	34.3%	38.6%	46.3%	53.3%	24.4%	37.3%	39.0%
Rural municipalities (B4)	-18.7%	111.8%	41.0%	5.5%	-40.8%	21.0%	19.9%
National	-3.9%	13.6%	20.1%	25.4%	13.2%	7.8%	12.7%

Source: Commission calculations using National Treasury Municipal Finance Database (2011-2017)

Table 13: Real Outstanding Municipal Debt as a Percentage of Real Operating Expenditure, 2013/14-2018/19

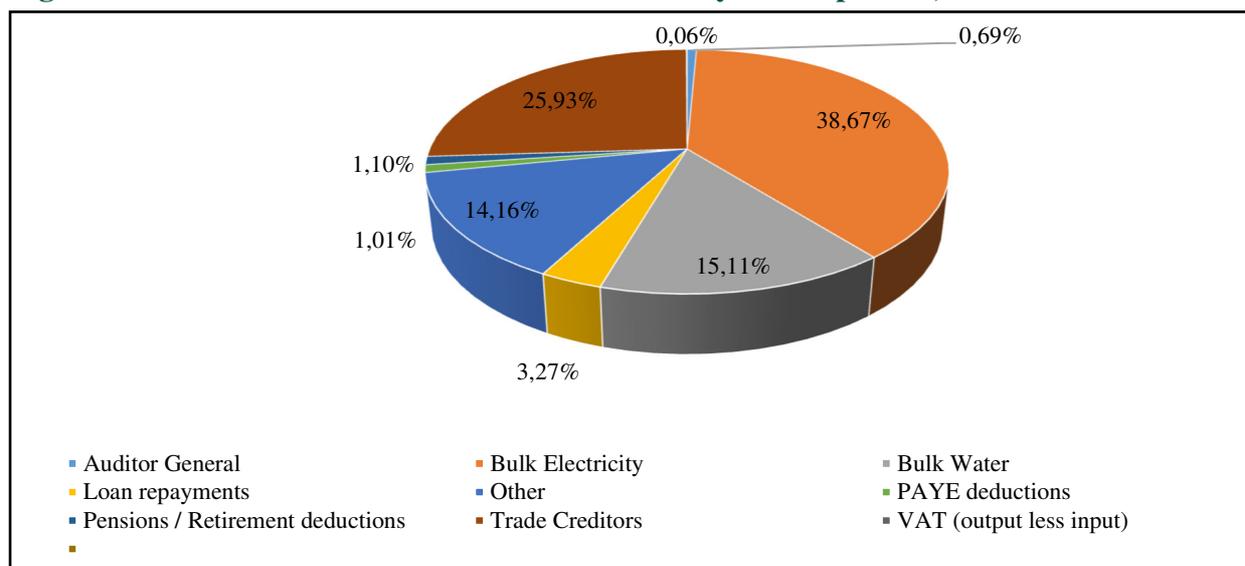
Real municipal debt as a proportion of real OPEX	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Metros(A)	7.92%	8.84%	9.46%	13.22%	9.14%	9.54%
Secondary cities (B1)	9.01%	9.94%	15.00%	22.67%	19.43%	23.27%
Large towns (B2)	6.39%	8.66%	10.86%	12.71%	14.70%	16.06%
Small towns (B3)	9.67%	13.03%	20.41%	37.75%	35.17%	39.36%
Rural municipalities (B4)	4.84%	6.47%	5.99%	5.01%	4.27%	3.27%
National	7.44%	8.65%	10.48%	14.96%	12.48%	13.62%

Source: Commission calculations using National Treasury municipal finance database (2013-2018)

Figure 12 illustrates the total debt of municipalities by category of creditor. It reveals that in 2017/18, bulk electricity (38.7 per cent) accounts for the largest proportion of the debt owed by municipalities. The second largest driver of the debt owed by municipalities is trade creditors (25.9 per cent) followed by bulk water (15.1 per cent).

Table 14 shows a similar trend can be observed across the various municipal categories, where the total outstanding municipal debt is largely driven by bulk electricity, trade creditors and bulk water.

Figure 12: Creditors as a share of total debt owed by municipalities, 2017/18



Source: Commission calculations using National Treasury municipal finance database, 2017

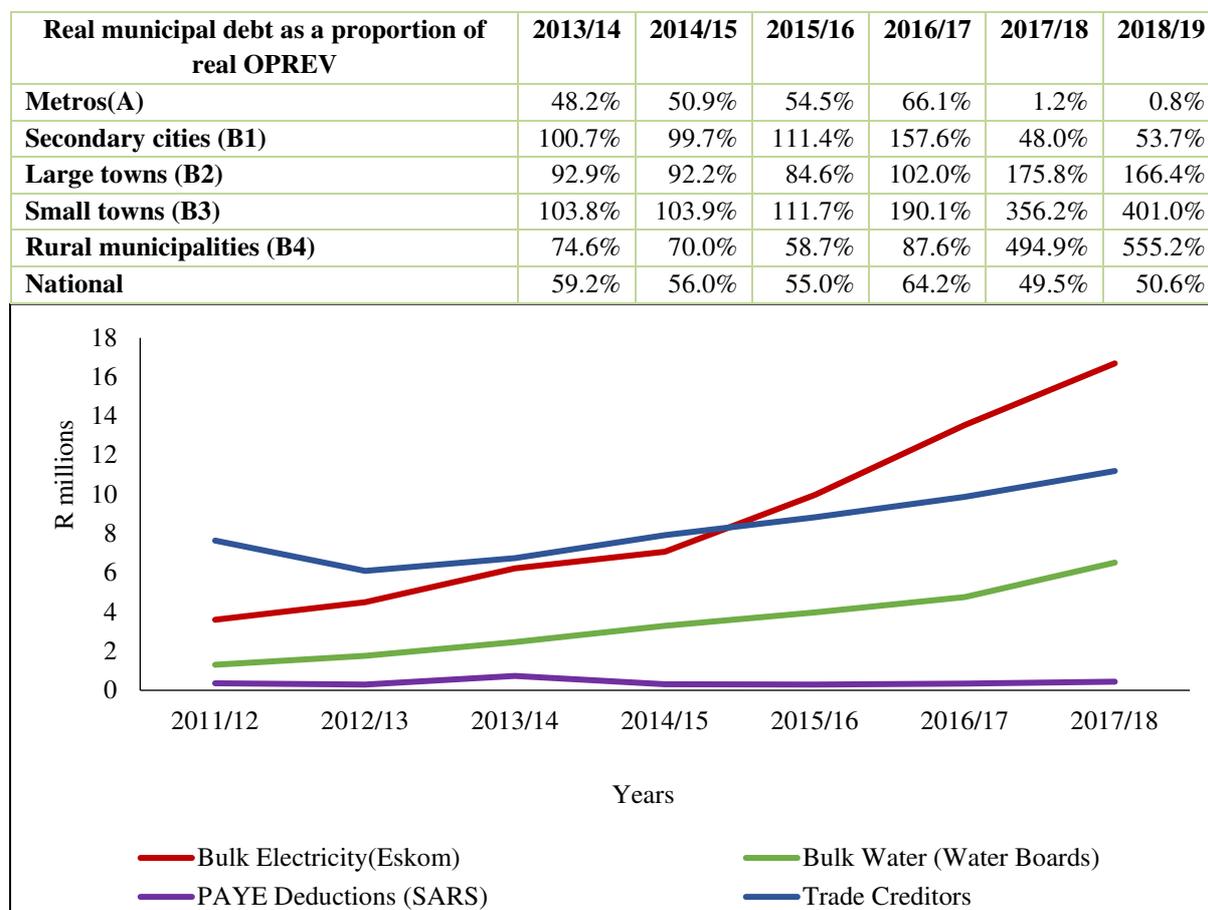
Table 14: Creditors as a share of total debt owed by municipalities (disaggregated by municipal category), 2017/18

Creditor	Metro (A)	Secondary cities (B1)	Large towns (B2)	Small towns (B3)	Rural (B4)
AGSA	0.01%	0.09%	0.72%	2.47%	0.24%
Bulk electricity	23.66%	45.36%	35.83%	61.61%	11.02%
Bulk water	6.63%	28.90%	23.77%	12.93%	33.03%
Loan repayments	7.00%	0.84%	0.24%	0.20%	0.00%
Other	22.62%	3.84%	14.95%	9.43%	6.90%
PAYE deductions	1.33%	0.35%	0.79%	1.10%	1.39%
Pensions/ retirement deductions	1.42%	0.36%	0.35%	1.48%	0.97%
Trade creditors	37.82%	20.14%	20.88%	10.57%	46.45%
VAT (output less input)	-0.49%	0.12%	2.47%	0.22%	0.00%

Source: Commission calculations using National Treasury municipal finance database, 2017

An analysis of non-payment of statutory duties (SARS) and the three largest municipal creditors (Eskom, water boards and trade creditors) over the period between 2011/12 and 2017/18 reveals that local municipalities face a significant challenge when it comes to meeting their debt obligations. Figure 13 shows that the total outstanding debt owed to Eskom has been on the rise, particularly between 2013/14 and 2017/18 where a sharp increase can be observed. Similarly, total outstanding debt owed to water boards and trade creditors has also been increasing over the period observed. By contrast, municipal debt owed to SARS has experienced a steady decline between 2013/14 and 2017/18.

Figure 13: Total outstanding municipal debt, 2011/12-2017/18



Source: Commission calculations using National Treasury municipal finance database (2011-2017)

Non-payment by municipal debtors

The analysis reveals that municipal consumer debt has been increasing for the period 2011/12 to 2017/18, particularly for rural municipalities. As shown in Table 15, the real annual average growth rates for municipal consumer debt for the period 2011/12-217/18 is declining for metros (-14.4 per cent) and secondary cities (-0.5 per cent) municipalities and there has been an increase for large towns (24.7 per cent),small towns (43.1 per cent) and rural municipalities (127. per cent) municipalities.

Table 16, which shows the real municipal consumer debt as a percentage of real operating revenue, confirms the severity of the issue of municipal consumer debt. Apart from metros and secondary cities, between 2013/14 and 2018/19 the proportion of real municipal consumer debt to real operating revenue has increased significantly for secondary cities, large towns, small towns and rural municipalities. This seems to suggest that municipalities that fall within these municipal categories should be monitored closely so as to ensure that municipal consumer debt does not serve to further erode the financial health of these municipalities, particularly rural

municipalities which experience a higher proportion of consumer debt relative operating revenue.

Real municipal debt as a proportion of real OPREV	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Metros(A)	48.2%	50.9%	54.5%	66.1%	1.2%	0.8%
Secondary cities (B1)	100.7%	99.7%	111.4%	157.6%	48.0%	53.7%
Large towns (B2)	92.9%	92.2%	84.6%	102.0%	175.8%	166.4%
Small towns (B3)	103.8%	103.9%	111.7%	190.1%	356.2%	401.0%
Rural municipalities (B4)	74.6%	70.0%	58.7%	87.6%	494.9%	555.2%
National	59.2%	56.0%	55.0%	64.2%	49.5%	50.6%

Table 15: Real year-on-year growth in municipal consumer debt per municipal category, 2011/12-2017/18

Source: Commission calculations using National Treasury municipal finance database (2011-2017)

Table 16: Real municipal consumer debt as a percentage of real operating revenue, 2013/14-2018/19

Real-year-on-year growth	2011/12-2012/13	2012/13-2013/4	2013/14-2014/15	2014/15-2015/16	2015/16-2016/17	2016/17-2017/18	Real annual average growth rate, 2011/12-2017/18
Metros(A)	13.0%	-0.7%	3.0%	5.3%	-9.2%	-97.8%	-14.4%
Secondary cities (B1)	15.4%	10.7%	-0.4%	16.4%	7.1%	-52.4%	-0.5%
Large towns (B2)	13.6%	3.9%	0.0%	-2.7%	19.4%	113.9%	24.7%
Small towns (B3)	18.0%	4.8%	10.2%	7.5%	14.6%	203.4%	43.1%
Rural municipalities (B4)	5.3%	50.8%	1.9%	-2.6%	8.0%	698.9%	127.0%
National	13.7%	4.1%	2.9%	6.7%	-0.5%	9.0%	6.0%

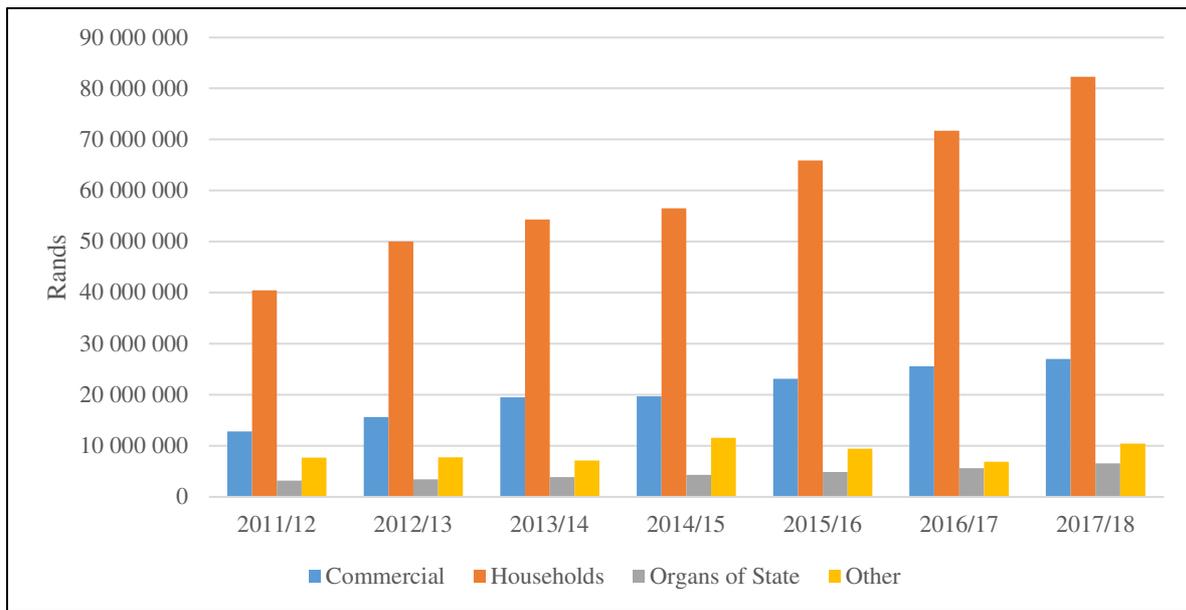
Source: Own calculations using National Treasury Municipal Finance Database (2011-2017)

Figure 14 and

Figure 15 illustrate the municipal consumer debt by consumer group and income source, respectively, for the period 2011/12 to 2017/18. From Figure 14, it is evident that households account for the bulk of the amount owed to municipalities, followed by businesses. While the organs of states are not responsible for the largest share of municipal consumer debt, it should be noted that non-payment by this consumer group has been growing steadily over the period reviewed.

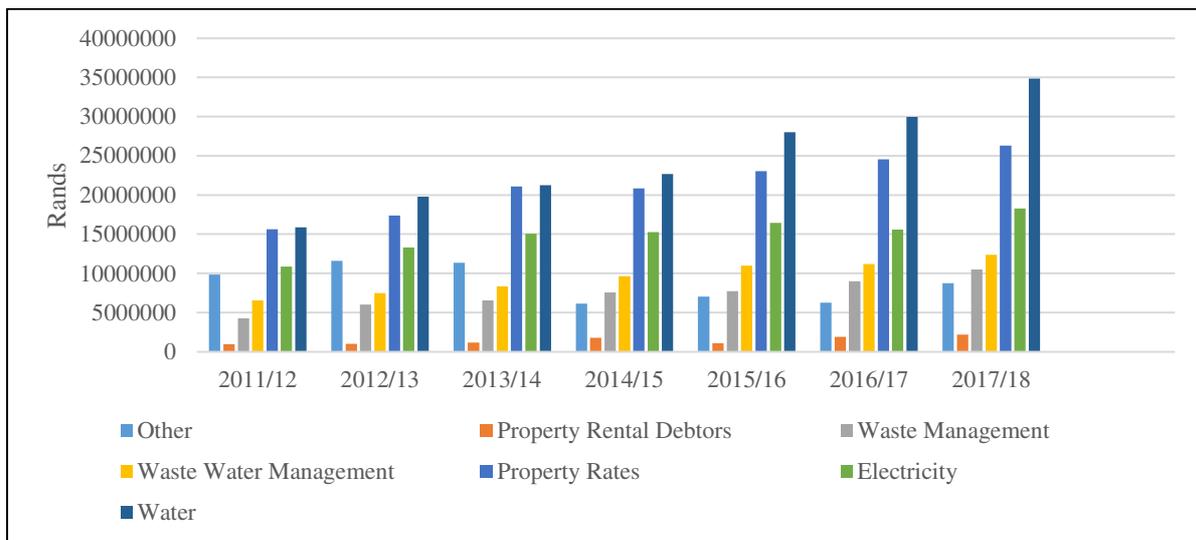
Figure 15, which focuses on municipal debt by income source, reveals that water is responsible for the largest share of municipal consumer debt, followed by property rates and electricity.

Figure 14: Disaggregation of municipal consumer debt by customer grouping, 2011/12-2017/18



Source: Commission calculations using National Treasury municipal finance database (2011-2017)

Figure 15: Disaggregation of municipal consumer debt by income source, 2011/12 - 2017/18



Source: Commission calculations using National Treasury municipal finance database (2011-2017)

Honing in on non-payment by organs of state

This section hones in on non-payment by organs of state, namely national and provincial government departments as well as other public institutions¹⁰.

¹⁰ Other public institutions include major public entities and institutions such as national government enterprises, national public entities, provincial government enterprises and provincial public entities, other municipalities and traditional authority property.

As highlighted in Table 17, the analysis reveals that between 2013/14 and 2017/18, provincial governments have consistently made up the bulk of the debt owed by organs of state. This is followed by national government departments.

Table 17: Non-payment by national and provincial government departments as a share of the total owed by organs of state, 2013/14-2017/18

Organs of state	2013/14	2014/15	2015/16	2016/17	2017/18
National government	25.7%	36.9%	44.3%	33.9%	37.4%
Provincial government	64.6%	52.3%	43.2%	55.0%	46.3%
Other public institutions	9.7%	10.8%	12.5%	11.1%	16.3%

Source: Commission calculations using National Treasury municipal finance database (2011-2017)

While provincial government departments make up the bulk of the debt owed by organs of state, below shows that between 2013/14 and 2017/18 that these departments have experienced the lowest real growth in debt (6.3 per cent). By contrast, other public institutions (30.1 per cent) and national government (28.1 per cent) have experienced significant increases over the same period. Between 2016/17 and 2017/18, other public institutions and national government departments recorded real increases of 48.3 per cent and 11.2 per cent respectively, while provincial government departments saw a decline of 14.9 per cent in the real growth of its debt.

Table 18: Real growth of municipal consumer debt by organ of state, 2013/14-2017/18

Organs of State R'000	2013/14	2014/15	2015/16	2016/17	2017/18	
National government	991 467	1 765 633	2 695 405	2 513 674	2 950 561	
Provincial government	2 492 195	2 500 057	2 626 964	4 073 516	3 658 578	
Other public institutions	373 380	515 876	758 607	821 631	1 286 040	
Total	3 857 043	4 781 566	6 080 975	7 408 822	7 895 179	
Real-year-on-year growth (%)		2013/14-2014/15	2014/15-2015/16	2015/16-2016/17	2016/17-2017/18	Real Annual Average 2013/14-2017/18
National government		68.7%	45.2%	-12.7%	11.2%	28.1%
Provincial government		-5.0%	0.0%	45.2%	-14.9%	6.3%
Other public institutions		30.9%	39.9%	1.4%	48.3%	30.1%
Total		17.5%	21.0%	14.1%	1.0%	13.4%

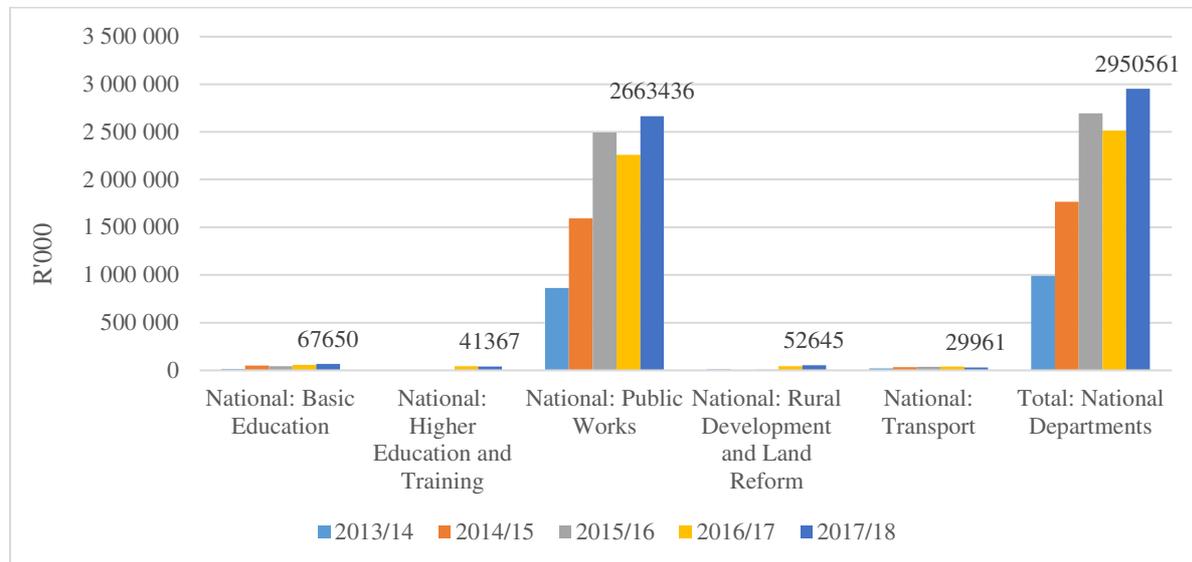
Source: Commission calculations using National Treasury municipal finance database (2011-2017)

Disaggregation of non-payment by government departments

An analysis of non-payment by the top five defaulting national departments reveals that the departments of public works, of basic education, higher education and training, rural development and land reform as well as transport are responsible for the bulk of the debt owed to municipalities. As Figure 16 shows, in 2017/18, the national department of public works owed R2.7 billion, which translates to about 90 per cent of the outstanding debt, while the

departments of basic education, higher education and training, rural development and land reform as well as transport collectively owed R191 million, which is close to 7 per cent of the total debt owed by national departments.

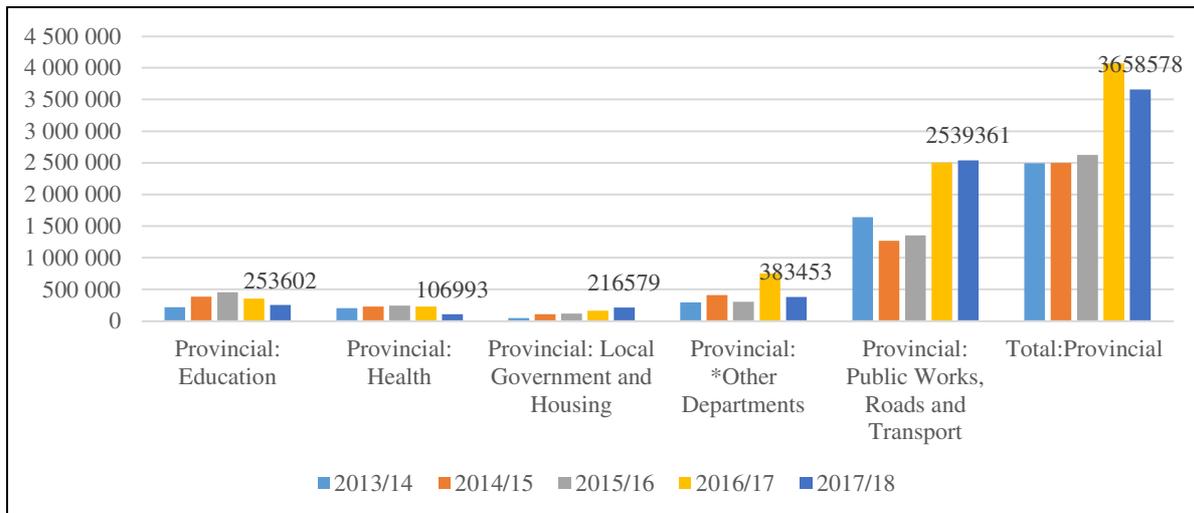
Figure 16: Total outstanding debt of the top five defaulting national departments, 2013/14-2017/18



Source: Commission calculations using National Treasury municipal finance database (2011-2017)

Figure 17 shows that the provincial departments of education, health, LG and housing, public works, roads and transport make up the bulk of the debt owed to municipalities. In 2017/18, the Department of Public Works, Roads and Transport owed R2.5 billion, which implies that it is responsible for about 70 per cent of the debt owed by provincial departments. The Departments of Education, Health, Local Government and Housing as well as other departments that exclude the provincial departments of agriculture, office of the premier, social development and sports, arts and culture collectively owed R960 million, which makes up 26 per cent of the total outstanding debt owed by provincial departments.

Figure 17: Total outstanding debt of the top five defaulting national departments, 2013/14-2017/18



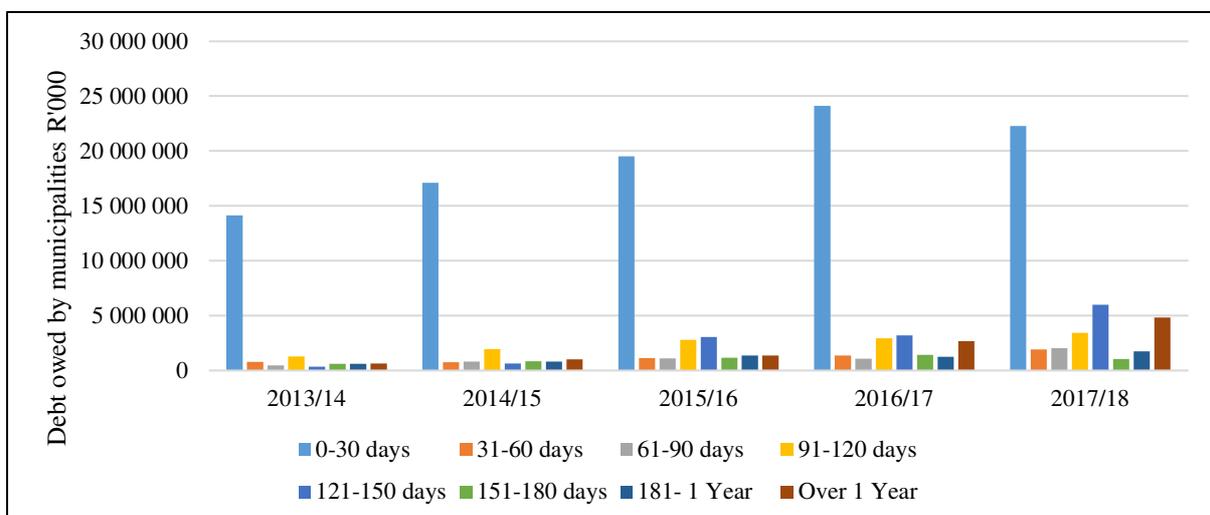
Source: Commission calculations using National Treasury municipal finance database (2011-2017); *other departments excluding the provincial departments of agriculture, office of the premier, social development and sports, arts and culture.

Analysis of historical debt

Creditors age analysis

As shown by Figure 18, over the 5-year period between 2013/14 and 2017/18, debt outstanding for 0-30 days is dominant, which suggests that municipalities are experiencing cash flow issues and there is a need to adopt measures that ensure sound cash management. Notably, between 2015/16 and 2018/19, the debt outstanding for 91-120 days, 121-150 days and over 1 year is beginning to grow, which may suggest that there are other broader issues or challenges that municipalities are faced with when it comes to the management of its cash.

Figure 18: Period for which debt owed by municipalities was outstanding, 2013/14-2017/18

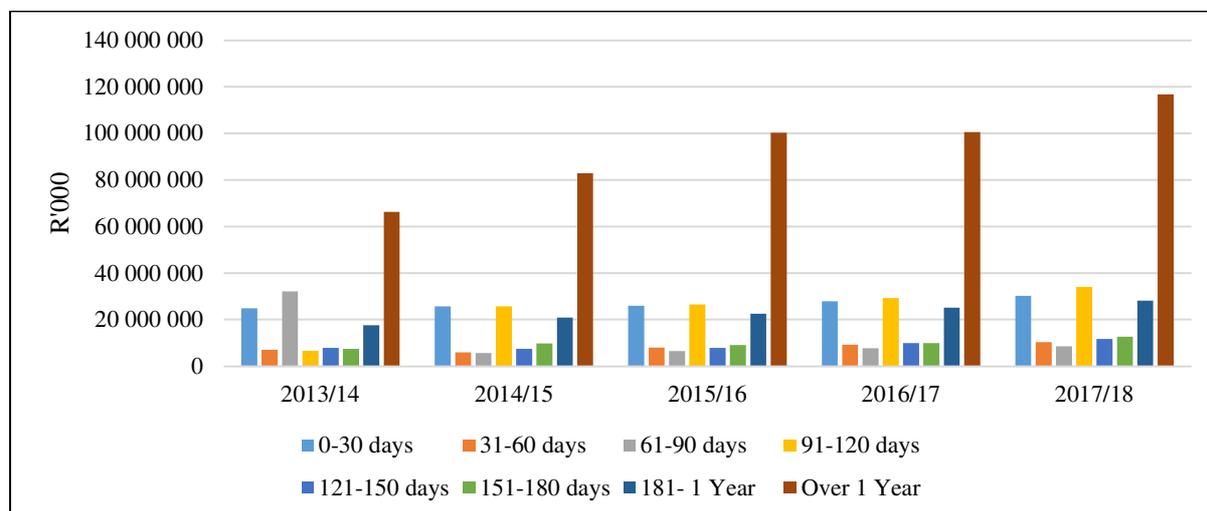


Source: Commission calculations using National Treasury municipal finance database (2011-2017)

Debtors age analysis

Figure 19 below illustrates the period for which municipal consumer debt was outstanding for period 2013/14 to 2017/18. It reveals that debt outstanding for over one year is dominant and has been increasing for the period reviewed, which points to poor debt management.

Figure 19: Period for which municipal consumer debt was outstanding, 2013/14-2017/18



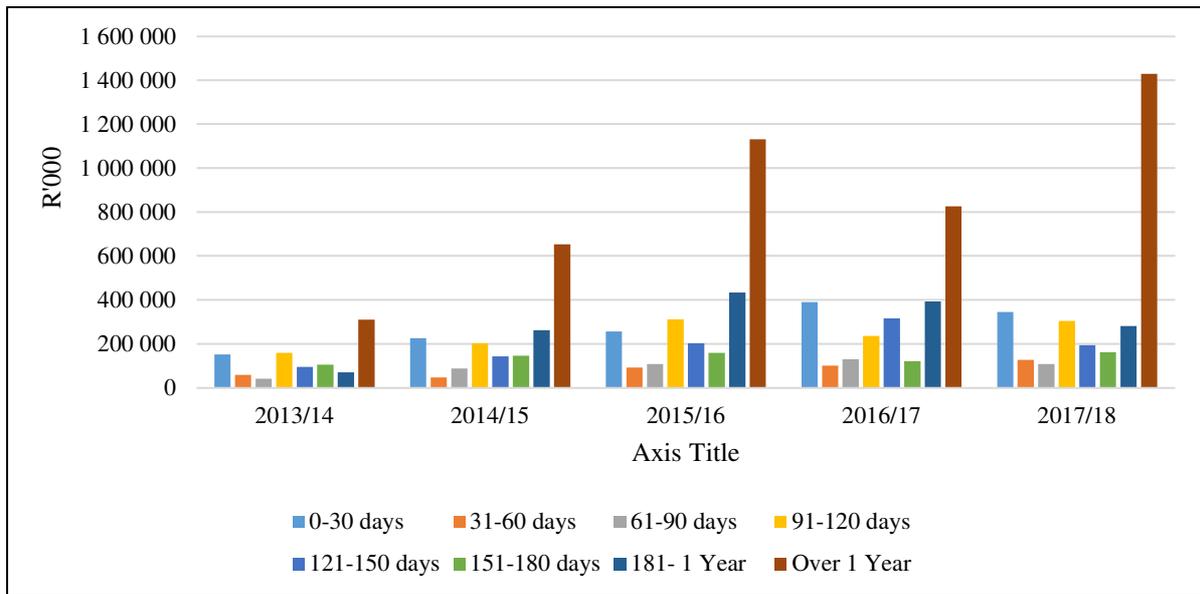
Source: Commission calculations using National Treasury municipal finance database (2011-2017)

Debtors age analysis for organs of state

Figure 20 and Figure 21 illustrates the period for which debt owed by national and provincial departments was outstanding for the period 2013/14 to 2017/18. With respect to national departments, debt outstanding for over one-year accounts for the largest share of debt and this has been increasing for the period 2013/14 to 2017/18, while for provincial departments debt outstanding for over one year has declined for the period reviewed, but it remains the most dominant. In the case of other public entities (as shown by

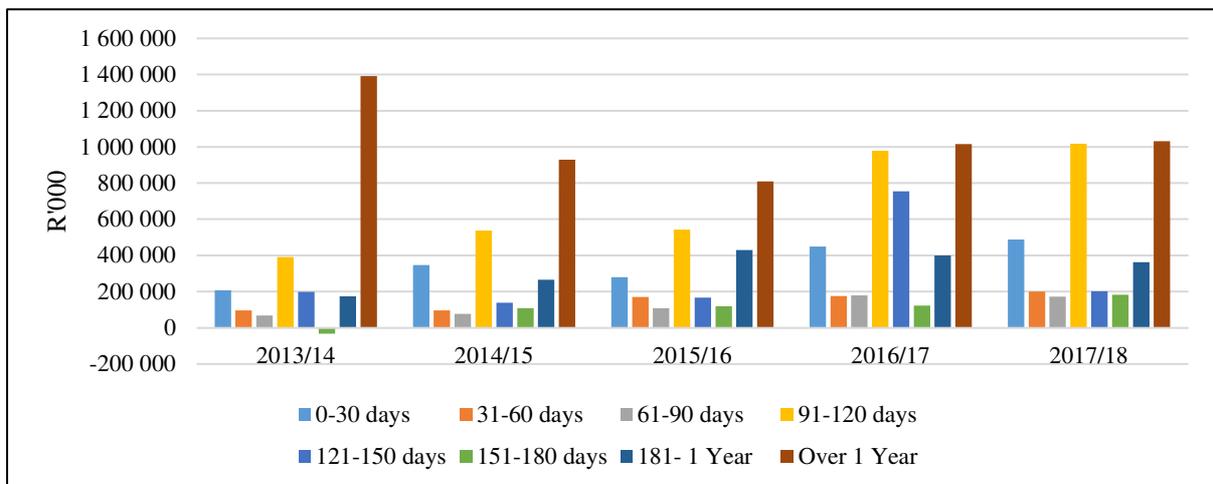
Figure 22), between 2013/14 and 2016/17, debt outstanding for 91-120 days constituted the largest share of the debt but in 2017/18 debt outstanding for over one year started to dominate.

Figure 20: Period for which debt owed by national departments was outstanding, 2013/14 -2017/18



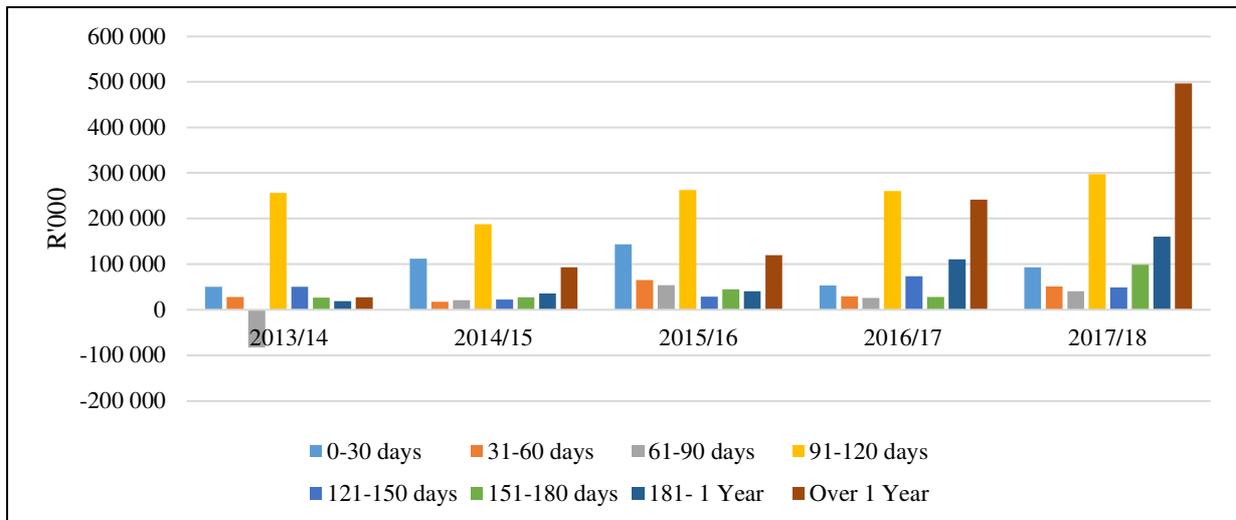
Source: Commission calculations using National Treasury municipal finance database (2011-2017)

Figure 21: Period for which debt owed by provincial departments was outstanding, 2013/14-2017/18



Source: Commission calculations using National Treasury municipal finance database (2011-2017)

Figure 22: Period for which debt owed by public entities was outstanding, 2013/14-2017/18



Source: Commission calculations using National Treasury municipal finance database (2011-2017)

Drivers of non-payment

This section highlights some of drivers of non-payment or challenges that may contribute to the inability to meet debt obligations that have been cited by the municipalities that were interacted with.

Drivers of non-payment by municipalities

Municipalities indicated that the main reasons driving municipal defaults and non-payment or late payment of creditors relates to cash flow problems, disputes over invoices and instances where officials do not follow proper supply chain management (SCM) processes.

Drivers of non-payment consumers

With respect to households, owing to high unemployment levels, the inability to pay is the main driver of non-payment. In the case of organs of state, the drivers of non-payment relate not only to the lack of responsibility by government departments but also poor record management by municipalities which contributes to delayed payments by departments. In respect of businesses, the key drivers of non-payment are attributable to cash flow constrains.

Recommendations

With respect to municipal debt, the Commission recommends that:

3. The Minister of CoGTA, in consultation with the Minister of Finance, and provincial governments should assist local municipalities, especially those with limited resources, to develop effective credit control systems;
4. Municipalities should apply the usual credit control measures (including interruption of electricity and water services) to national and provincial government departments who do not honour their contractual obligations. In this regard it should be noted that a dispute

about non-payment constitutes an intergovernmental dispute which may invoke the Intergovernmental Relations Framework Act provisions.

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Chapter 5

Assessing Support Programme Impact for Local Government, Back to Basics (B2B)

Chen Wei Tseng

Introduction

At the dawn of democracy, the South African Constitution ushered in a model of intergovernmental relations that created three ‘interdependent and interrelated’ spheres of government. The White Paper on Local Government (1998) envisaged that these newly formed municipalities, through expanding basic services, would be the key to addressing the *apartheid* legacy of socio-economic divide and creating a vibrant, inclusive economy. Two decades later, despite some successes in basic services access and support programmes by the government, the LG sphere remains fragile, with its finances in disarray. Municipal service delivery protests coupled with governance failures often require these dysfunctional municipalities to be placed under administration. That 87 of the current 257 municipalities have been identified as dysfunctional or “in distress” is evidence of the degree of failure in the LG sphere to fulfil the legislative mandate and developmental role that was envisaged for it in the Constitution.

In a bid to turn around the poor performance of municipalities, particularly as far as financial management, infrastructure delivery and human capital were concerned, the government introduced a series of LG support programmes. The most recent instalment implemented was the Back to Basics (B2B) programme in 2014, operating on the basis of restoring municipal financial and functional viability, or “getting the basics right”. Other key stakeholders, such as the South African Local Government Association (SALGA), the National Treasury and provincial governments also joined in as part of the B2B programme to provide support to local municipalities in distress.

The purpose of this chapter is to provide a first-hand, empirical account of the B2B support programme impact, using objective non-financial and financial census data, to draw relevant lessons and to make cogent recommendations to the government on support programme design. By providing effective support to LG through programme design, municipalities will be better equipped to utilise scarce resources more efficiently, and address institutional and policy deficiencies. The results of this study will also help strengthen the intergovernmental fiscal relations (IGFR) system by observing the municipalities to avoid the fiscal stress that triggers expensive provincial interventions in terms of section 139 of the Constitution, as well as other interventions by national government.

The objectives of the study are threefold:

- To review the support programmes and interventions in the LG sphere since the advent of democracy in South Africa;
- Based on census data from 2012-2017, assess the success of the B2B programme and determine whether the latest support programme has brought any performance improvement in identified municipalities using a Difference-in-Difference (DID) methodology; and
- To provide recommendations that will enhance the support programme designs and interventions of fiscal instruments to improve support impact.

The sections of the chapter deal address the following:

- Section 2 scans the literature to draw lessons from experiences on LG support initiatives;
- Section 3 provides an overview of the notable support programmes for the LG sphere implemented by the government since the advent of democracy in 1994;
- Section 4 discusses the data issues and research approach adopted for this study. Included in the section are detailed metadata to describe the rationale and data generation procedure followed to create the variables used in the study;
- Section 5 provides a brief descriptive analysis of the municipal financial and non-financial information compiled;
- Section 6 conducts an econometric analysis and interprets the results; and
- Section 7 concludes with specific recommendations to the government on the way forward for developing LG through support programme initiatives.

Literature review

The literature on LG support programmes and its impact on improving service delivery is surprisingly scant. This is probably because support programme concepts are generally classified as part of a larger public sector reform process on a continuum, motivated by a change of policy or politics (e.g. electoral cycle) in an advanced setting of governance. As a result, the support programmes itself often take on much the same rhetoric and objectives with an expanding scope over time at each turn of its makeover.

Nevertheless, Aulich (1999) notes that there is a ‘life-cycle’ to LG support programmes in terms of focus. Witnessed during the LG reform period before the turn of the 21st century in Australia, he notes that in the early stages of the reform, support structures and designs concentrated primarily on redefining the roles and intergovernmental relationships of the LG through the state LG Acts. As the reform agenda takes form, however, the focus of the support programme turns toward managerial developments and capacity. At this stage, differences in processes and performance outcomes between LGs begin to emerge due to inherent, heterogeneous, geo-political and social-economic attributes. As LG develops further with widening performance differentials, the motivation for decentralisation or greater democratisation of local authorities takes over, as local politicians start demanding greater

autonomy (Local Government Association of New South Wales (NSW) and Shires Association of NSW 1991, 1992, Local Government Association of Queensland 1992). It then reaches a point where one of the conditions for accepting reform supports from the state government is that local autonomy must be preserved, despite indirect pressures from the state systems (Municipal Association of Tasmania, 1991–92).

Moreover, a common support argument advanced by proponents of local council amalgamation (e.g. by population size) is that “bigger is cheaper” due, *inter alia*, to economies of scale in local council service provision. Dollery *et al* (2008) and Aulich (2011) interrogated this notion and concluded that it is fallacious to use population size as a proxy for scale economies in Australian LG. Aulich (1999) found that: “Experience suggests that shared services should not be regarded as a panacea”, as the incentives to protect local authority autonomy are strong. Also, service sharing only appears to be “scratching the surface” of institutional and governance issues in the majority of cases.

Andrews (2005) looks at the impact of local authority autonomy by representative bureaucracy and targeted capacity support interventions with a local focus on performance. The empirical evidence on English LG shows that representative bureaucracy is negatively associated with citizens’ perceptions of local authority performance, despite deliberate capacity supports based on local demographics of representatives. However, organizations pursuing a prospector strategy of outward looking, searching for new market opportunities and experimenting with potential responses to emerging trends in the environment, are able to mitigate this negative relationship. This implies that the success and failure of the support intervention depends heavily on the accuracy of observation and continuous identification of the LG performance in relation to the support intervention conceived.

Shakleton *et al* (2002) examine the evidence from a number of studies on the impact of natural resource devolution through state support policies in several Asian and southern African countries from the perspective of local people. They conclude that most “devolved” natural resources management (NRM) reflects rhetoric more than substance, and is characterised by some continuation of substantive central government control and management over natural resources rather than a genuine shift in authority to local people. The ways in which local people realise the benefits of devolution also differ widely, with lasting negative trade-offs (e.g. timber and agroforestry species favoured by forestry departments were usually promoted at the expense of species valued by poor people for medicine). Hence, careful re-assessment of the state’s claim to be protecting the wider public interest should be a perpetual task to develop a shared framework, more accountable to local livelihood needs and people’s rights to self-determination. Simply put, central government should not assume supremacy in support interventions unless it can accurately observe, measure, and monitor the performance of the LG. A balance must be maintained between recognising the limitations of the central government and capabilities of the LG in ensuring the appropriateness of positioning the power of determination as to where and how a support programme should be initiated.

From this study, Shakleton *et al* (2002) advises that government should be vigilant against powerful actors in communities who tend to manipulate devolution outcomes to suit the local elites. Checks and balances therefore need to be in place. Strong local organisational capacity and political capital enhance outcomes for local people by enabling them to mobilise resources and negotiate better benefits. NGOs, donors, federations and other external actors have a key role in moving devolution policy and practice towards local interests.

In South America, support programmes have been focused on democratisation or popular participation in terms of planning and development to improve LG efficiency with ambiguous outcomes (Freire and Stren, 2001). Blair (2000) undertook a six-country study (Bolivia, Honduras, India, Mali, the Philippines and Ukraine) to analyse the impact of this approach of “citizenry participation” and “accountability” on LG service delivery. The result shows that there are important limitations to these support initiatives, as they always cover a very wide a range of activities, leading to a dilution of the support strategy relatively initially envisaged and thus little in the way of empowerment, and even less in making the distribution of benefits more equitable or reducing poverty as impacts.

Overview of LG support programmes in South Africa: 1995-present

Since the advent of democracy and the establishment of the institutional, legislative and regulatory system of LG, South Africa has been confronted with a legacy challenge. Some municipalities, particularly those in previously disadvantaged areas, lacked the financial means and institutional capacity to fulfil their assigned mandate in terms of the Constitution. In response, various support programmes were initiated aimed at revitalising LG finances, governance and development, in an attempt to stimulate economic growth from the basic units of local households and municipalities.

Period 1995-2004

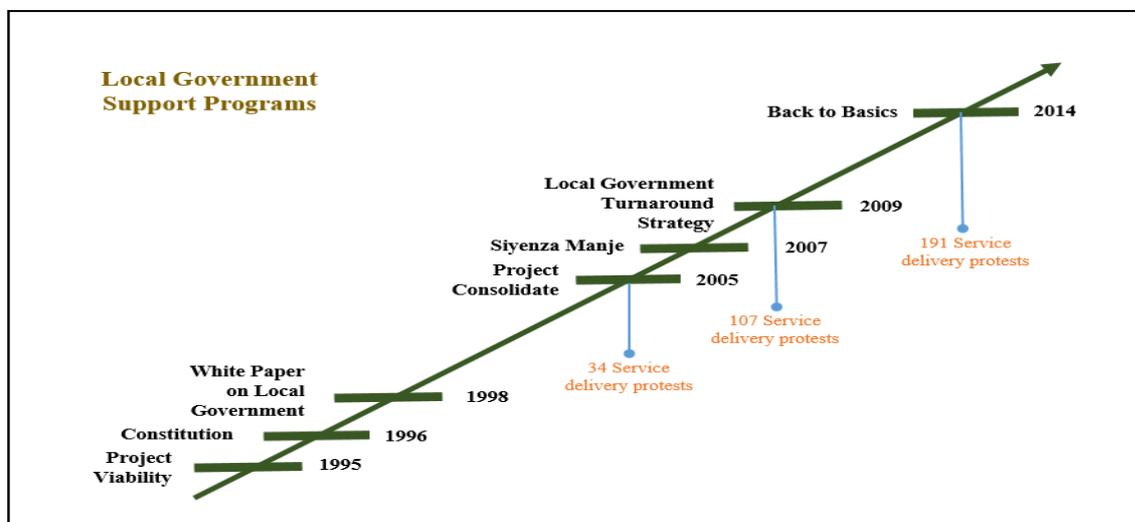
Following the 1995-96 local elections in terms of the Local Government Transition Act, 1993 (Act No. 209 of 1993), the Department of Provincial and Local Government launched Project Viability. The focus of the project was to monitor and address the short-term liquidity issues such as payment levels, arrears of credit control and revenue collection of some 1 262 LG bodies across the country. Around the same time, the Masakhane campaign (1995-1997) or “Let’s build together” was initiated, geared towards transforming local governance and facilitating development from a “civic responsibility and participation” point of view. The overarching aims of Masakhane were to accelerate the delivery of basic services and housing, stimulate economic development from the base, and promote the resumption of rent, service charges and bond payments.

In terms of the LG structure, with the promulgation of the 1996 Constitution [section 155(3)(b)], members of the provincial executive councils (MECs) were no longer responsible for the determination of municipal boundaries and the 1 262 LG bodies were amalgamated into 843 local authorities. Near the turn of the new century, the introduction of the Municipal Demarcation Act, 1998 (Act No. 27 of 1998) established the constitutional body of the

Demarcation Board to demarcate municipal boundaries of the Republic. Seeking to establish financial viability through amalgamation, the Municipal Demarcation Board rationalised the total number of municipalities from 843 to 284 municipalities (8 metropolitans, 44 district and 228 local municipalities) in 1999/2000 for the 2000 Local Government election in December.

Despite these transformative agenda for financial and structural reconfiguration of the LG sphere through Project Viability, the Masakhane campaign and demarcating the municipal boundaries, the results were below expectations. Evidence suggests that not only had the payment level for municipal services by household declined - especially in major metropolitan areas - but accumulated debt by households also increased (Lubbe & Rossouw, 2014).

Figure 23: Local government support programmes



Source: Commission (2018)

Period 2004-2008

In 2004, in response to the 139 designated municipalities that were struggling to fulfil their mandates (Department of Provincial and Local Government (DPLG), 2005), Department of Cooperative Governance and Traditional Affairs (COGTA) implemented Project Consolidate to replace Project Viability. During the two-year rotational strategy to improve service delivery and address backlogs in underperforming municipalities, technical experts were deployed to 136 municipalities to provide hands-on support and transfer skills to officials in financial, technical and policy-related areas (Powell, 2012). The initial plan identified three remedial steps in an attempt to generate effective outcomes:

- Stabilise administrative and political components within the municipalities;
- Implement a systematic programme of capacity building and ensure that qualified expertise was adequately deployed and capacitated; and
- Strengthen the performance management system.

Following the initiation of Project Consolidate, a comprehensive review of the first term of LG: “Five-year local government strategic agenda” was submitted to Cabinet in 2006. It concluded that due to the legacy of *apartheid* and the amalgamation of municipalities, new

legislation and complex coordination of service provisions to address the huge service backlogs were required. The lack of management, technical, leadership capacity and the unspecified roles of the national and provincial spheres of government also added to the fragility and confusion in the municipal system. Major weaknesses such as unreliable data, complex reporting systems and the reliance on substantive institutional support for control systems, compromised the effectiveness and impact of these support programmes. Municipalities largely failed to report in terms of the Municipal Systems Act as required (DPLG, 2006).

After investing estimated R500 million in helping struggling municipalities over a three-year period, Project Consolidate was terminated in 2007 (SALGA, 2015). Despite government's efforts as part of Project Consolidate, the Auditor-General of South Africa (AGSA) indicated in the audit report for 2009/10 that the support programme had had little impact on improving the financial performance of municipalities. The reasons given for the failure included that the measures were unable to be fully implemented due to the project duration being too short. More significantly, municipal staff turnover was high and often, so the technical advisors could not find staff to whom skills could be transferred (SALGA, 2015).

In 2004, government introduced a capital grant, the Municipal Infrastructure Grant (MIG), to fund basic infrastructure. Concerned about LG's capacity to implement capital projects, the Development Bank of South Africa (DBSA) implemented "Siyenza Manje" in 2006, a support programme to assist under-capacitated municipalities. Deployment of task teams was at the request of municipalities. A feature of the programme was three years on-the-job training by the task team for built-environment graduates who were placed in various municipalities (SALGA, 2015).

During the first phase of implementation (2006–2009), 500 technical experts were deployed to 174 municipalities. Despite some signs of success (SALGA, 2015), municipalities have generally spent their MIGs poorly and implementation challenges were rife. Even to this day, the COGTA has had to evoke Section 18 of the Division of Revenue Act to withhold funding to a large number of municipalities that did not meet the expenditure requirements or comply with the provisions of the act. As at end of March 2018, MIG funding to 56 municipalities totalling R669 million was stopped and reallocated, despite the support and intervention measures municipalities received (The Select Committee on Appropriations, 24 May 2018).

Period 2009–2013

In 2009, the newly formed COGTA conducted an assessment on the "State of local government in South Africa". The assessment again found that LG was in distress and characterised by serious service delivery backlogs, a breakdown in citizen engagement, political interference in administration, and widespread corruption. The assessment of 115 local municipalities and 23 district municipalities was that they were highly or very highly vulnerable, with most of the under-performing municipalities located in former Bantustan areas (COGTA, 2009). In the same year, National Treasury reported to the Technical Committee on Finance that 69 municipalities were in financial distress.

In response to this crisis in the LG sphere, then Minister for Cooperative Governance and Traditional Affairs introduced the overarching local government turnaround strategy (LGTAS) in 2009. The strategy is aimed at achieving three key priorities: i

- Improve access to basic services;
- Deepen participatory democracy; and
- Enhance financial management and administrative capacity (Powell, 2012).

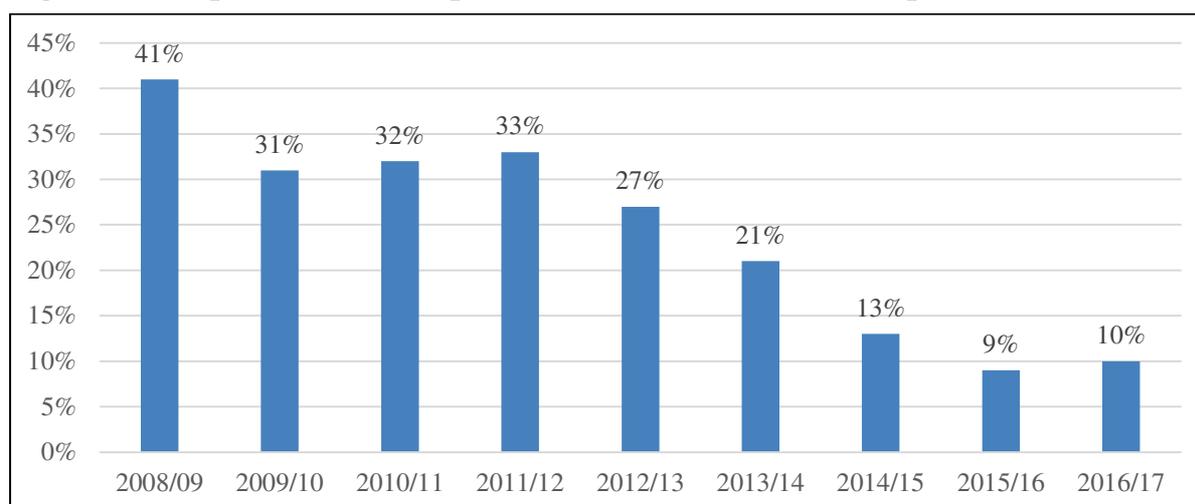
The LGTAS consisted of a number of key sub-interventions, such as operation clean audit, ward committee operational plan to promote community participation in the development of the integrated development plans (IDPs). The Municipal Infrastructure Support Agency (MISA), established as a government component within COGTA, was crafted to build technical capacity in infrastructure delivery and capacity, develop multi-agency partnerships to address corruption, and reduce red tape to boost local economic development. According to MISA, the key lesson learnt for municipal success was the value of this “whole of government” approach, with both inter- and intra-governmental cooperation to encourage good practice, as well as addressing weaknesses to achieve infrastructure delivery.

Other COGTA-initiated support programmes complementing the LGTAS and aimed at boosting skills in LG were training programmes for municipal competencies and an artisan development programme (COGTA, 2009).

The National Treasury also provided a range of support programmes to struggling municipalities, including the deployment of technical advisors to improve capacity in financial management (National Treasury, 2017). To access such support, municipalities needed to have personnel in the positions identified for capacitation and a comprehensive capacitation programme also had to be in place. National Treasury also assisted struggling municipalities in breach of section 216 of the Constitution with the development of a financial recovery plan and engaging the municipalities (National Treasury, 2012). Municipal officials were also offered financial management training to capacitate them in scarce competencies. In 2011, the number of municipalities re-determined were 278 municipalities (8 metropolitans, 44 district and 226 local municipalities).

SALGA (2014) was another important stakeholder that provided support to municipalities during this period. Interventions ranged from providing financial management training to offering hands-on support aimed at improving municipal audit outcomes to under 75 poor-performing municipalities. Figure 23 shows a significant reduction in the number of municipalities that received a disclaimer and adverse opinions from the AGSA. These findings might suggest that financial management in municipalities was improving over this period. However, a closer look at municipal irregular, unauthorised, fruitless, and wasteful expenditure as reflected in Table 19 shows an increasing trend over this period, suggesting marginal success at best, in improving municipal audit outcomes.

Figure 24: Proportion of municipalities with disclaimer/adverse opinion



Source: AG Reports (various), Commission calculations

Table 19: Municipal irregular, unauthorised and wasteful expenditure (R million)

Year	Irregular	Unauthorised	Fruitless and wasteful expenditure
2009/10	4 140	5 000	189
2010/11	7 323	5 081	284
2011/12	8 882	10 241	578
2012/13	13 083	8 506	851
2013/14	11 761	11 765	685
2014/15	14 989	15 418	1 346
2015/16	12 771	17 148	931
2016/17	28 952	12 604	1 694

Source: AG Reports (various)

Hence, despite these efforts, a range of studies on the impact of the LGTAS (Bokwe, 2014, Meyer and Venter, 2014, Mathane, 2013) concluded that the implementation of the strategy had been poor and that it fell considerably short of its intended goals. An assessment by COGTA (2014) found that some municipalities perceived the LGTAS as another unfunded mandate without any budget attached and municipalities treat it as an appendix to their IDP. In addition, reporting requirements by LGTAS sometimes overlapped with other reporting requirements in the provincial oversight and support programmes, adding to the already onerous administrative burden of municipalities resulting in fragmented and uncoordinated outcomes in the LG sphere.

Period 2014 to the present

The new minister of COGTA introduced the B2B programme in 2014 in response to growing concerns relating to systemic problems in the LG sphere. An assessment by COGTA in 2014 found that 63 per cent of municipalities were either dysfunctional or almost dysfunctional (COGTA, 2014). Only 7 per cent of municipalities were doing well. At the presidential local government summit held in September 2014, the B2B programme acknowledged the

institutional incapacity characterised by the lack of appropriate skills of the ward councillors and committees. Widespread poverty, which undermines the financial viability and sustainability of the LG project, led to a catastrophic breakdown in services in some instances. The B2B programme was aimed at getting the basics right in five priority areas:

- Basic services to create decent living conditions;
- Good governance;
- Public participation;
- Financial management; and
- Institutional capacity (see Table 20).

Currently, there are 257 municipalities (8 metropolitans, 44 district and 205 local municipalities), as some Category B municipalities underwent the process of amalgamation - effective from the 2016 local election date.

Table 20: B2B priority areas and associated performance indicators

Priority outcome	Indicators
Basic services: creating decent living conditions	<ul style="list-style-type: none"> ✓ Develop fundable consolidated infrastructure plans ✓ Ensure infrastructure maintenance and repairs to reduce losses with respect to: <ul style="list-style-type: none"> ○ Water and sanitation ○ Human settlements ○ Electricity ○ Waste Management ○ Roads ○ Public Transportation ✓ Ensure the provision of Free Basic Services and the maintenance of Indigent register
Good governance	<ul style="list-style-type: none"> ✓ Holding of council meetings as legislated ✓ The functionality of oversight structures, s79 committees, audit committees and district IGR forums ✓ Progress following interventions over the last 3-5 years ✓ Existence and efficiency of anti-corruption measures ✓ Compliance with legislation and the enforcement of by-laws ✓ Rate of service delivery protests and approaches to address them
Financial management	<ul style="list-style-type: none"> ✓ The number of disclaimers in the last 3-5 years ✓ Realistic budgets based on cash available ✓ Percentage revenue collected ✓ Extent of debt serviced ✓ Efficiency and functionality of supply chain management
Institutional capacity	<ul style="list-style-type: none"> ✓ Filling of top-six posts with competent and quality persons: <ul style="list-style-type: none"> ○ Municipal manager ○ Finance ○ Infrastructure ○ Corporate services ○ Community development and ○ Development planning ✓ Realistic organograms, underpinned by an affordable service delivery model ✓ Human resources development and management programmes ✓ Platforms to engage organised labour to minimise disputes and disruptions ✓ Established systems such as billing ✓ Maintaining experience and institutional memory
Public participation	<ul style="list-style-type: none"> ✓ Required number of functional ward committees ✓ Number of public participation programmes conducted by councils ✓ Regular community satisfaction surveys

Source: Adapted from B2B concept note

Data and research approach

The data sources for this research are drawn from StatsSA's annual non-financial censuses conducted in June each year, and municipal finance data from National Treasury using the audited information. The period under review is three financial years prior to (2012-2014), and after (2015-2017) the implementation of the B2B programme in 2015, in order to draw a time-balanced comparison for statistical inference.

The non-financial census of municipalities datasets, published annually by StatsSA is exceptionally rich in performance information, especially on matters of institutional capacity and basic services of municipalities. Data on vacancies, human resources, basic services, indigent households, free basic services consumers and policy implementation are contained in the dataset. The municipal finance data of National Treasury is comprised of datasets from various financial publications and audit reports of all municipalities, which includes both credit and debit analyses, balance sheets, income statements and cash flow.

The compiled dataset has 1 647 observations, each with 129 variables of financial and non-financial information. The observation units are the municipalities, which comprised 257 municipalities in 2017 due to re-demarcation effective from 03 August 2016, and 278 in the years 2012-2016. Municipal sub-category classification is imported from StatsSA's community survey of 2016 and has 14 missing values in 2017 due to the re-determination process. Of these 14 municipalities with truncated data, five have been identified as dysfunctional with non-financial information in the censuses.

A difference in differences (DID) approach¹¹ is employed, using 2015 as the year of treatment for the B2B support programme. The treatment group consists of the 87 priority municipalities identified as distressed or dysfunctional requiring urgent intervention (2018 COGTA Budget). The control (non-treatment) group is the remaining municipalities. The classification of the 87 dysfunctional/distressed municipalities in 2018 as the treated is justifiable in this study for three reasons:

- First, the B2B support programme is a national initiative, spread across all municipalities in the country. By narrowing down on assessing the impact of the B2B programme on these distressed and dysfunctional municipalities identified in 2018, one is in effect, testing for reasons why the identification and the support programme failed to prevent dysfunctionality in these municipalities in 2018, despite the implementation of the B2B programme.
- Second, not only is the support programme implemented nation-wide in phases, but the extent to which each municipality is supported varies and heterogeneous, depending on assorted sets of criteria, determined separately by the national and provincial departments. In other words, the grouping of municipalities receiving supports by

¹¹ Difference in differences studies the differential effect of a treatment on a "treatment group" versus a "control group". It calculates the effect of a treatment (i.e., an explanatory variable or an independent variable) on an outcome (i.e., a response variable or dependent variable) by comparing the average change over time in the outcome variable for the treatment group, compared to the average change over time for the control group.

different institutions under the B2B programme could vary depending on the focuses of the support programmes, and overall B2B's impact (if any,) is best found on the most vulnerable i.e. these 87 identified municipalities.

- Third, the B2B programme is continuing into the future, which makes the treatment group identification less relevant. What is more important is the response of municipalities to B2B programme implemented as impact. Simply put, the treated group here are negative observations, and the difference in differences methodology is measuring how and why these municipalities responded negatively and classified as dysfunctional, despite existence of the B2B programme.

Finally, as a way of confirming the findings, a few engagements, formal and informal, will be conducted with a random selection of municipalities at SALGA (e.g. research colloquium) chief financial officer's (CFOs), and FFC's own research seminar. Key national and provincial stakeholders of the COGTA and provincial Departments of Local Government will also be engaged to validate the findings in this study. These engagements will shed further light on the intergovernmental and coordination challenges experienced with the support programme as lessons for future formulations of support programmes.

Data issues and variable challenges

For the purposes of this study, there are several caveats in terms of data consistency and variable generation that ought to be highlighted.

- First, in terms of data consistency, the paper deliberately abstained from using surveyed datasets for measuring services at the local municipality level such as the community survey of 2016, the general household survey, or any survey with non-random samples. This is because these surveys are updated once every five years and are subject to high risks of data selection or endogenous response rates. For the purposes of identifying the impact of the B2B programme, whereby municipalities are assessed on their viability in terms of providing quality basic services, conducting financial management, attracting, and refining sufficient institutional capacity, more frequent, administrative data is required.
- Second, as noted above, there was a re-demarcation of municipalities effective from 03 August 2016 (mostly in KwaZulu-Natal and the Eastern Cape), which reduced the number of municipalities from 278 to 257 in 2017 as observations in the data. This will affect the impact analysis of the study, as these re-demarcated municipalities essentially become unobservable in the 2017 data. Furthermore, since those 87 municipalities identified as dysfunctional or treated were based on the re-demarcated municipalities, those original municipalities in the old demarcation, amalgamated into new municipalities, are also classified as dysfunctional, in order to capture the maximum extent of the treatment in this impact study. Details of the old and the new municipalities formed, disbanded and incorporated identified as treated are attached in the Appendix to this chapter in Table 24.

In terms of the variables generated in the study, due to the wide range of priority areas and some subjective indicators in the B2B support programme, it is impossible to measure the impact for all the performance indicators listed in Table 20 as the outcome variables. The alternative of using a composite measure for performance as the dependent variable is also problematic, since the scope of the B2B support programme is wide-ranging, encompassing various priority areas. Finally, for some indicators, there is simply no available data necessary to constitute with objectivity a sufficient empirical base on which to deduce impact of the B2B support programme.

As a compromise, this paper selected and derived proxy variables with available data as outcome indicators in line with the five associated priority areas of the B2B programme for analysis, as described below:

Basic services: creating decent living conditions

The data for basic services contain the number of domestic and non-domestic consumer units for water, electricity, sewerage and sanitation and solid waste management. It also measures the quality of water and sanitation services in terms of consumer units inside the yard for water supply, and connected to public sewerage system for sanitation. The variables are not as described as such in the B2B support programme. However, reasonable assumptions can be made that both the quantum of consumer units of services and quality measures together satisfy the necessary condition for infrastructure maintenance and repair to reduce losses in basic services.

Furthermore, on ensuring the provision “of free basic services and the maintenance of the indigent register”, the non-financial census provides detailed accounts of those municipalities which have implemented the policy relating to free basic services, the number of municipalities providing free basic services at the standards required, and the number of domestic consumer units receiving these services. In terms of the indigent register, the census provides the number of households benefiting from the indigent support system for water, electricity, water and sanitation, as well as solid-waste removal management.

Good governance

In terms of good governance, the non-financial census does unfortunately not provide many of the relevant indicators as specified in the B2B priority outcome associated performance indicators as per Table 20, save for the number of councillors in a municipality. This is because the indicators for good governance are mostly subjective in nature and difficult to measure. For instance, although there is an occupancy rate for councillors, it is impossible to know that “council meetings were held as legislated” as an indicator in the B2B support programme. Another such example is the “rate of service delivery protests and approach to address them”. Using principal component regression to measure service delivery protests in South African Municipalities, Morudu (2017) concluded that there is a significant gap in the literature in linking service delivery protests to service delivery, and that most inferences drawn have been qualitative rather than quantitative due to the lack of objective data.

Financial management

Data for financial management is sourced from the municipal finance database of the National Treasury. Audit opinions on the outcomes of financial statement are captured in terms of the number of disclaimers between 2012 and 2017, ranging from zero to six. “Realistic budgets based on cash available” and “Percentage revenue collected” are jointly represented by “operating surplus or deficit after tax” in the income and expenditure statement, as well as “cash/cash equivalents at the month/year end” of the cash statements of municipalities. Finally, “extent of debt serviced” is measured by the level of “borrowing” in the balance sheets.

Institutional capacity

Information on institutional capacity is captured in the non-financial census of municipalities. The filling of key posts in managerial positions, finance, infrastructure (for water, electricity, waste management, wastewater and water) and community development is represented as rate of full-time occupancy in each category. The number of managerial positions according to “organogram” and s57 as the explanatory variables denotes the indicator of “a realistic organogram is underpinned by delivery model”. These measures together broadly represent the human resource capacity and institutional functions of a municipality.

Public participation

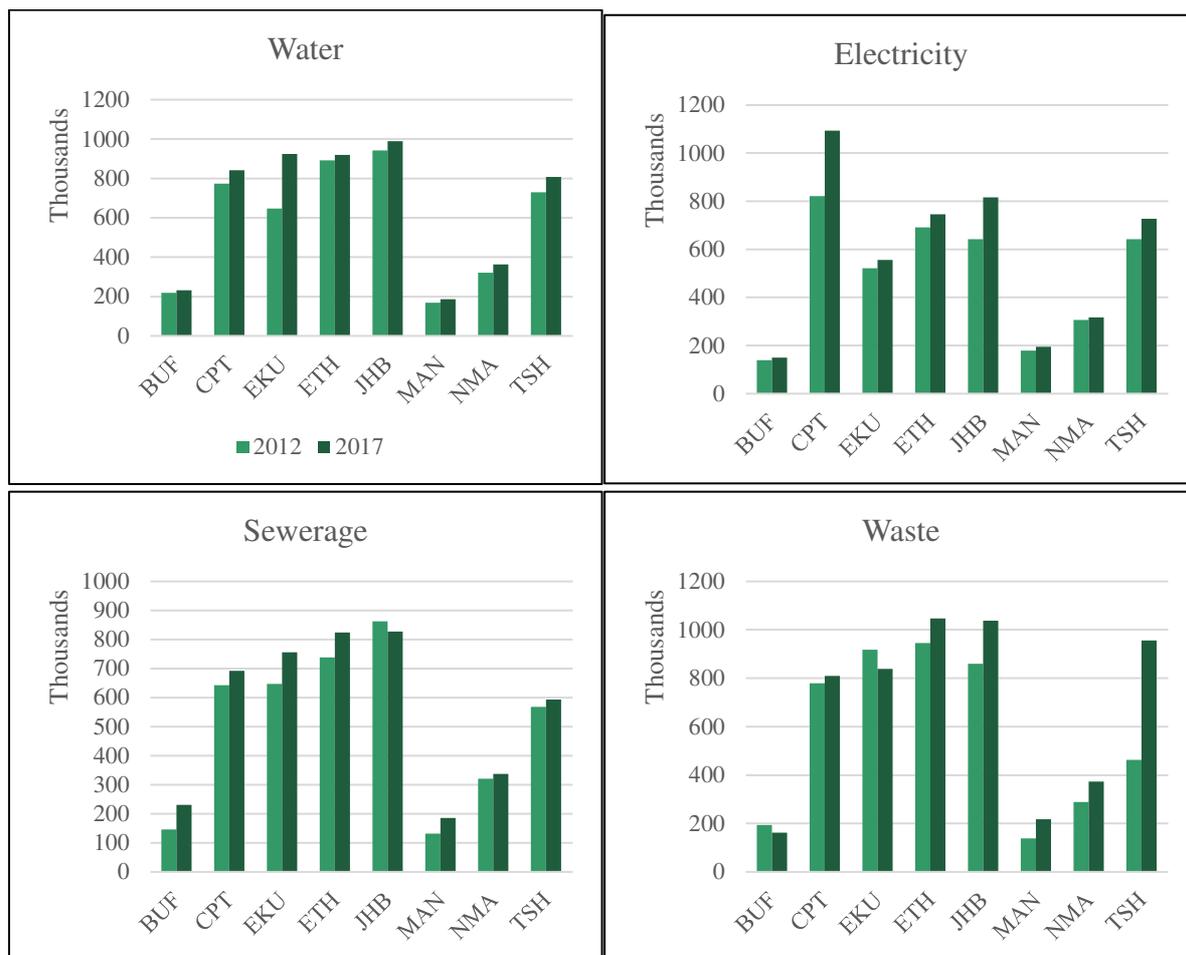
The indicators for the priority area of public participation is perhaps the most controversial component of the B2B programme, as it is difficult to measure the success rate of public participation. The data on what constitutes and qualifies a functional ward committee are also practically undefinable in research for measuring impact.

Based on these derived variables then, the study will assess the impact of the B2B support programme. The next section provides a first-hand descriptive analysis of the non-financial censuses, looking at key performance variables’ general trends over the period under review. The intent is to determine whether the support programme is having any discernible impact on municipal performance at the aggregated level since its implementation in 2015.

Descriptive overview

The most basic enquiry in municipal performance is the number of consumer units receiving the basic services of water, electricity, sewerage and waste. Figure 25 to Figure 27 show that the level of service is vastly different between municipal sub-categories. Figure 25 shows the wide disparity in scale of consumer units that exists between the metropolitan municipalities in South Africa. Metros providing considerably more consumer units with basic services are City of Cape Town, Ekurhuleni, eThekweni, City of Johannesburg and City of Tshwane. Ekurhuleni expanded the most in terms of the number of consumer units by more than 270 000 consumer units receiving water services during the period under review. City of Cape Town improved its consumer units receiving electricity from 821 075 units to nearly 1.1 million units. City of Tshwane was lagging behind in terms of consumer units for waste removal, serving less than 50 per cent of those receiving waste removal services in eThekweni. In 2017, serviced units in the City of Tshwane however increased from 463 122 in 2012 to 956 000 units.

Figure 25: Number of consumer units receiving services in the metros, 2012 and 2017

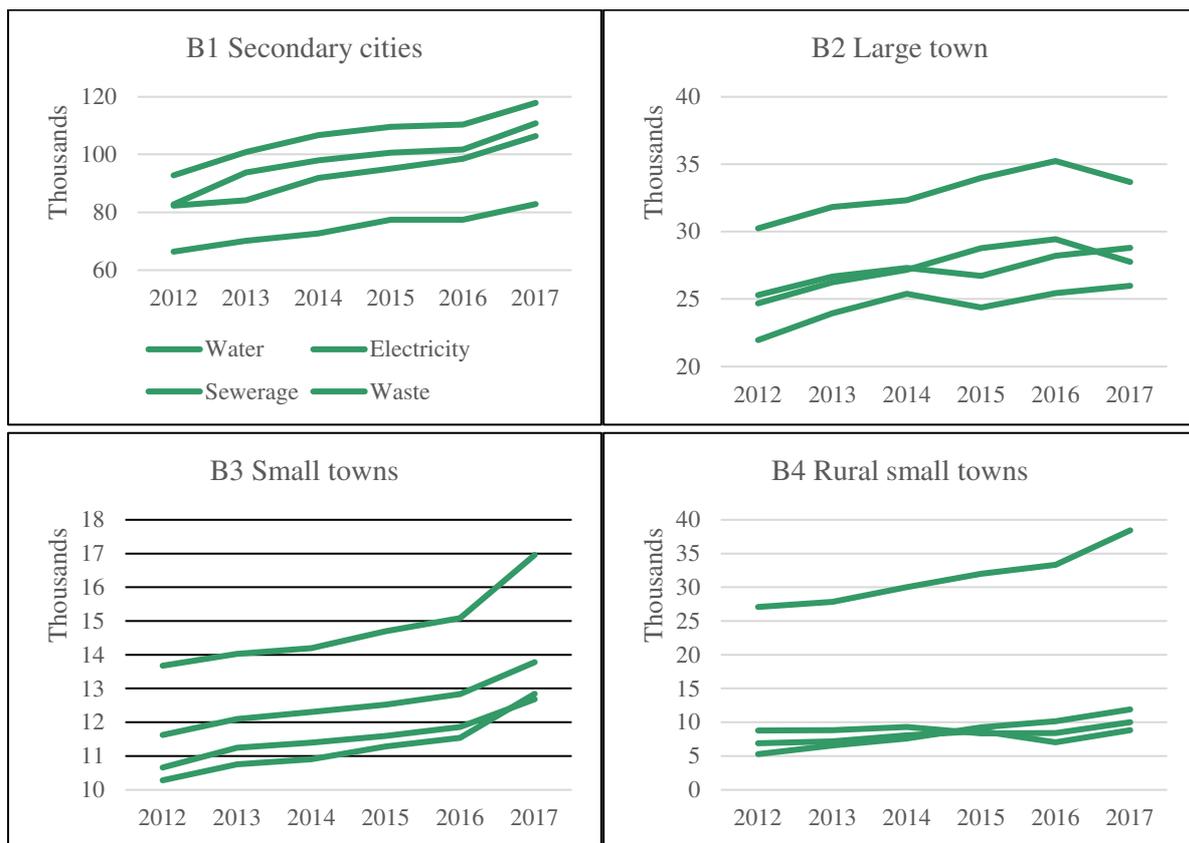


Source: Statistics South Africa (StatsSA) Non-Financial Censuses 2012-2017; National Treasury Municipal Finance Data; and Own calculations

According to the data, metropolitan municipalities that deteriorated in consumer units serviced during the period under review were City of Johannesburg for sewerage and sanitation, and Buffalo City and Ekurhuleni for waste removal.

Figure 26 and Figure 27 show a divergence or cross-substitution in terms of municipal functions among categories B and C municipalities as average consumer units receiving basic services. In terms of category B municipalities, it is interesting that B2, B3 and B4 municipalities' consumer units in water, sewerage and waste consumer units are considerably less than their electricity consumer units, whereas B1 secondary cities' services are fairly proportional in units. It is also worth noting that B3 municipality's electricity consumer units on average are less than averaged consumer units in B4 rural small towns.

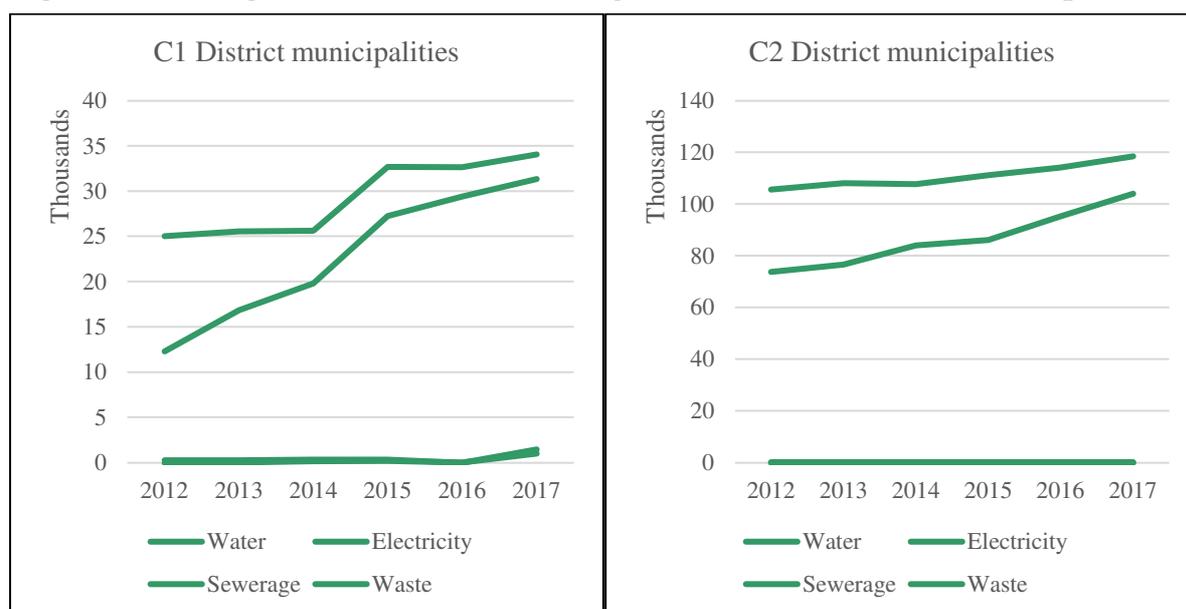
Figure 26: Average consumer units receiving basic services in category B municipalities



Source: Statistics South Africa (StatsSA) Non-Financial Censuses 2012-2017; National Treasury Municipal Finance Data; and Own calculations

Furthermore, according to the data, B2 municipalities providing consumer units for electricity and waste removal tapered off in 2017, though this may again be due the re-demarcation of municipalities. All other basic services by municipal sub-categories increased consumer units during the period under review. Figure 27 shows that most district municipalities do not provide electricity and waste removal services to households, and only provide consumer units with water and sewerage services. On average, consumer units for water and sewerage more than doubled between 2012 to 2017.

Figure 27: Average consumer units receiving basic services in district municipalities



Source: Statistics South Africa (StatsSA) Non-Financial Censuses 2012-2017; National Treasury Municipal Finance Data; and Own calculations

In terms of proportion of municipalities that implemented free basic services by sub-category, calculated as the total number of municipalities implemented free basic services divided by total number of municipalities of that sub-category, is presented in Table 21. All category A (metros) and B1 (secondary cities) municipalities have implemented free basic services for the period under review, thus they are not presented in the table.

Table 21: Proportion of municipalities that implemented free basic services, 2012 and 2017

	B2		B3		B4		C1		C2	
	2012	2017	2012	2017	2012	2017	2012	2017	2012	2017
Water	0.74	0.71	0.83	0.78	0.21	0.15	0.14	0.29	0.88	0.88
Electricity	1.00	0.92	0.98	0.96	0.83	0.97	0.04	0.11	-	-
Sewerage	0.74	0.71	0.78	0.77	0.14	0.10	0.14	0.29	0.56	0.63
Waste	1.00	0.96	0.92	0.92	0.46	0.63	0.04	0.11	-	-

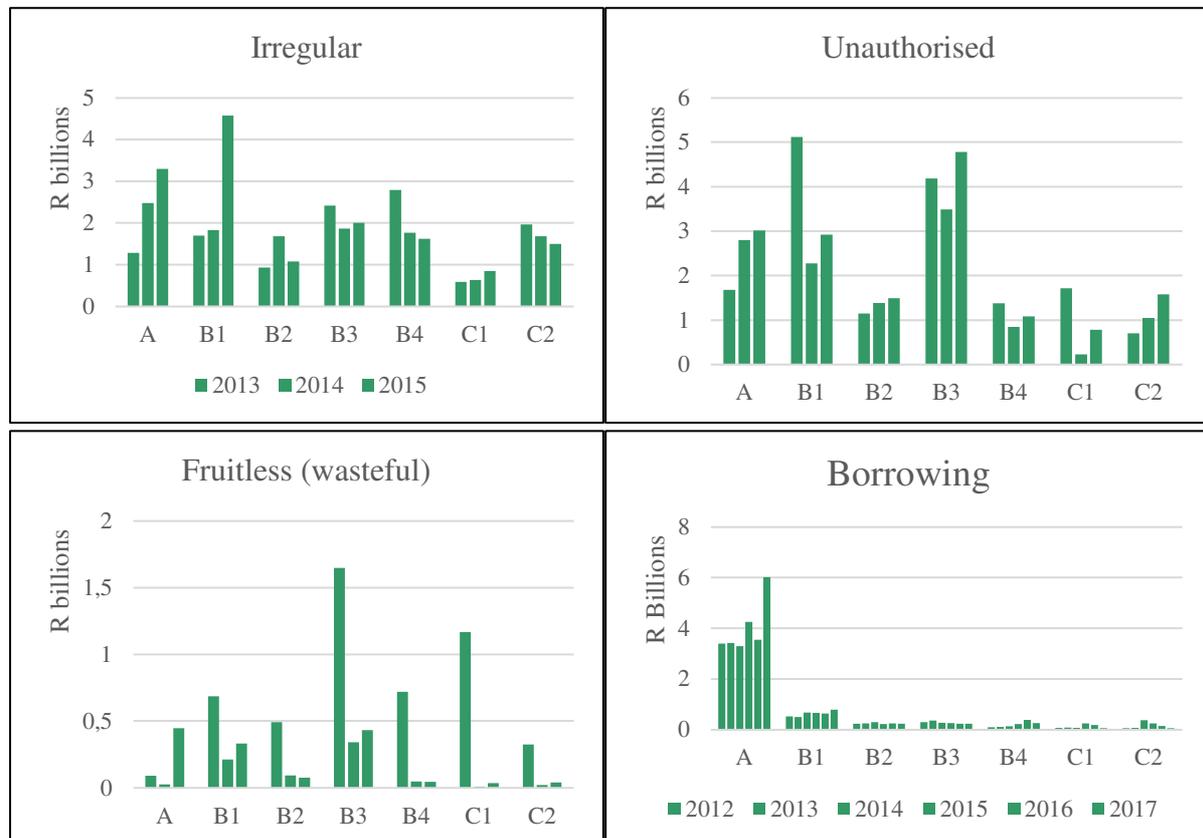
Source: Statistics South Africa (StatsSA) Non-Financial Censuses 2012-2017; National Treasury Municipal Finance Data; and Own calculations

According to the calculations, it is of note that B4 rural municipalities have the least compliance rate in free basic services implementation, especially for water and sewerage. These gaps in free basic services implementation are in some cases covered by C1 and C2 district municipalities and vice versa. This uncertainty in municipal functions of services, where some of a category’s municipalities provide certain services, while others do not, causes major impediments to monitoring and evaluation of municipal performance.

For category B municipalities, the data in Table 21 indicate that the implementation of free basic services has, by and large, deteriorated. More specifically, the share of municipalities

implementing free basic water, electricity, sewerage and waste removal decreased for all category B municipalities, save for electricity and waste removal services in B4 rural municipalities on electricity and waste, which increased from 0.83 to 0.97 and 0.46 to 0.63, respectively.

Figure 28: Total amounts by municipal sub-category type of expenditure, and borrowing



Source: Statistics South Africa (StatsSA) Non-Financial Censuses 2012-2017; National Treasury Municipal Finance Data; and Own calculations

In terms of financial management and governance, examining the total amounts of irregular, unauthorised, fruitless expenditure and borrowings with available data suggests that category A and B1 municipalities' irregular expenditure more than doubled in two years from 2013 to 2015. B1 municipalities in particular nearly tripled its amount of irregular expenditure from R1.7 billion to more than R4.5 billion. In terms of unauthorised expenditure, B3 is high risk with more than R4.5 billion in spending reported as unauthorised in the 2015 year. Fruitless expenditure is most prevalent in categories A and B3 municipalities of the same year.

It is worth noting that almost all municipalities except for metropolitan municipalities had significantly higher amounts of fruitless expenditure in 2012 relative to 2015. Category A municipality's deterioration in financial management in terms of irregular, unauthorised and fruitless and wasteful expenditure causes further concerns when combined with municipal borrowing. As the data show, municipal borrowings in the metros far exceeded other municipalities by a significant margin. More specifically, total borrowing by the metros nearly doubled from R3.5 billion in 2016 to R6 billion in 2017.

Results

The DID impact result for measuring the LG B2B support programme impact is presented in Table 22. It is worth noting that since none of the metropolitan municipalities was identified as dysfunctional or distressed to be treated, it is impossible to derive DID results for the metros. Furthermore, only the treatment-outcome indicators that showed a significant influence are presented. (A full list of outcome variables tested for significance can be found in Table 25 in the Appendix to this chapter.)

Table 22: DID impact results for the B2B programme, 2012-2017

Variables	B2	B3	B4	C1	C2	Total
Consumer units: waste removal				1,181*		
Domestic consumer units: free basic electricity					-1,006*	
Domestic consumer units: free basic sewerage and sanitation	-4,867**					
Domestic consumer units: free basic waste removal	-5,59***					
Proportion of households: indigent sewerage		-0.111*				
Municipal borrowing			6.7e+6**			
Full-time councillors occupancy rate	0.351***					
Full-time community and services employment rate		-0.071*				
Full-time waste management employment rate						-0.091**
*** p<0.01 , ** p<0.05, * p<0.1						

The analysis shows mixed results for the B2B programme. More specifically, for B2 municipalities, the impact of the support programme implementation is associated with an increase in full-time councillor's occupancy rate, with volumes of domestic consumer units benefiting from free basic sewerage, sanitation and waste removal declined. For the B3 municipalities, the proportion of households receiving indigent support system of sewerage declined, together with full-time community and services employment rate for institutional capacity. During the period under review, municipal borrowing increased significantly for the B4 municipalities, albeit from a low base as identified earlier in Figure 28. Interestingly, consumer units for waste removal service in C1 district municipalities improved significantly during this period, while domestic consumer units for free basic electricity in C2 districts declined. Overall, the full-time employment rate of waste management reduced despite the existence of the B2B programme.

To ensure that the DID analysis presented above is clear of any endogeneity issues caused by the re-demarcation which renders some municipalities unobservable in the analysis, Table 23

strips out the effect of the re-demarcation by removing the observations in 2017 from the regressions.

Table 23: DID impact results for the B2B programme, 2012-2016

Variables	B1	B2	B3	B4	Total
Domestic consumer units: free basic sewerage and sanitation		-4,153*			
Domestic consumer units: free basic waste removal		-5,246**			
Proportion of households: indigent sewerage	0.165*		-0.124*		
Municipal borrowing				5.5e+6*	
Full-time councillors occupancy rate		0.330***			
Full-time community and services employment rate			-0.086*		
Full-time waste management employment rate					-0.090*
*** p<0.01, ** p<0.05, * p<0.1					

The results in Table 23 again present a mixed reaction by municipalities towards the impact of the B2B LG support programme. The proportion of households receiving indigent sewerage service in B1 municipalities improved significantly. B2 municipalities show the same result of impact as in Table 22 as both domestic consumer units for free basic sewerage, sanitation and waste removal deteriorated, despite an increase in councillors' occupancy rate. B3 municipalities, as in Table 22 also show that both indigent sewerage units since the introduction of the B2B programme, as well as the full-time community and services employment rate have declined, showing signs of institutional weakening. B4 municipalities' borrowing still identifies a significant increase during the period under review for those municipalities in distress. Both C1 and C2 municipalities showed no signs of significance (Table 23), in contrast to the results on consumer units of waste removal and free basic waste removal in Table 22. This implies that the 2017 data with the re-demarcation effect has a significant impact on the results of identification and monitoring in the LG sphere, especially for district (category C) municipalities. Overall, the capacity for waste management declined.

Conclusion

South Africa's municipalities are in a state of institutional decline, exacerbated by persistent inequalities and widespread poverty, and entrenched administrative dysfunctionality. With 87 municipalities identified as dysfunctional and in distress, the need for an effective and impactful support programme to rescue these municipalities is greater than ever. Since the advent of democracy and the establishment of LG, South Africa has implemented a series of support programmes. This paper concludes with empirical evidence that the latest instalment of the support programme, B2B, has yielded mixed results with negative outcomes.

By means of empirics, this chapter found that municipal powers and functions are shared, outsourced and cross-substituted between municipalities, which causes problems in terms of monitoring and evaluation of municipal performance over time. The priority areas and associated performance indicators in the B2B support programme design also rely too much on broad concepts of “fundable” “functional” and “efficient” with intangible support objectives such as “anti-corruption measures” and “ward meetings”. There needs to be a renaissance of evidence-based identification, monitoring to impart differentiated, targeted supports and interventions. The power and costs of these should be held by those accountable for LG sphere, i.e. COGTA and provincial departments of LG. Finally, throughout the data analysis it became clear that re-demarcation and determination of municipal boundaries essentially “hides” observations, as amalgamated municipalities disappear from the dataset for continuous monitoring and evaluation of municipal performances. The following policy recommendations are made for consideration by Parliament:

Recommendations

With respect to the B2B Support Programme, the Commission recommends that:

1. The Minister of CoGTA narrows the current scope of focus, to performance aspects that are measurable and easily monitored.

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Appendix to chapter 5

Table 24: New municipal demarcation with effect from 3 August 2016

Old Municipality	New Municipality	Dysfunctional (treated)
Camdeboo LM	Dr Beyers Naude LM	X
Baviaans LM		
Ikwezi LM		
Nxuba LM	Raymond Mhlaba LM	X
Nkonkobe LM		
Tsolwana LM	Enoch Mgijima LM	X
Lukanji LM		
Inkwanca LM		
Maletswai LM	Walter Sisulu LM	X
Gariep LM		
Naledi LM	Manguang MM	
Manguang MM		
Westonaria LM	Rand West LM	X
Randfontein LM		
Kwa Sani LM	Dr Nkosazana Dlamini Zuma LM	X
Ingwe LM		
Vulamehlo LM	Incorporate to eThekweni and uMdoni	
Ezingoleni LM	Ray Nkonyeni LM	X
Hibiscus Coast LM		
The Big 5 False Bay LM	Big 5 Hlabisa LM	
Hlabisa LM		
Emnambithi/Ladysmith LM	Alfred Duma LM	X
Indaka LM		
Umtshezi LM	Inkosi Langalibalele LM	X
Imbabazane LM		
Uthungulu DM	King Cetshwayo DM	
uMlalazi LM	Incorporated to City of Umhlathuze, Mthonjaneni and uMfolozi municipalities	
Ntambanana LM		
Aganang LM	Incorporated to Blouberg, Molemole and Polokwane	
Greater Tubatse LM	Fetakgomo/Greater Tubatse LM	
Fetakgomo LM		
Mutale LM	Incorporated to Musina and Thulamela	
N/A	Collins Chabane LM	X
Mookgopong LM	Mookgopong/Modimolle LM	
Modimolle LM		
Umjindi LM	City of Mbombela LM	
Mbombela LM		
Tlokwe City Council LM	Tlokwe/Ventersdorp LM	
Ventersdorp LM		
//Khara Hais LM	David Kruiper LM	
Mier LM		

Source: StatsSA non-financial censuses 2012-2017

Table 25: Metadata

Province	Province	Province	
Year	Year	Year	
Muni	Municipality	Municipality	
s57_man_part	Table 1.1: Managerial positions by province according to Section 57 of Local Government Municipal System Act, 2000 (Act No. 32 of 2000): South Africa	Part-time	
s57_man_vacant		Vacant posts	
s57_man_total		Total	
s57_femp_rate		Full-time employment rate as per s57	
orga_man_part	Table 1.2: Managerial positions by province according to organogram: South Africa	Part-time	
orga_man_vacant		Vacant posts	
orga_man_total		Total	
orga_femp_rate		Full-time employment rate as per organogram	
s57_orga_disc	$(orga_man_total - s57_man_total)/s57_man_total$	Full-time employment discrepancy between organogram and s57 as a share of s57	
councilors_part	Table 1.3: Councilors by province: South Africa	Part-time	
councilors_vacant		Vacant posts	
councilors_total		Total	
counc_femp_rate		Full-time councilors occupancy rate	
mayor_part	Table 1.4: Executive mayor and mayor positions by province : South Africa	Part-time	
mayor_vacant		Vacant posts	
mayor_total		Total	
emp_part	Table 2.1: Employment including managerial positions by province: South Africa	Part-time	
emp_vacant		Vacant posts	
emp_total		Total	
emp_femp_rate	Table 2.2: Employment for position excluding managerial positions by department: South Africa 2013	Full-time managerial employment rate	
empman_comm_full		Community And Social Services	Full-time
empman_comm_part			Part-time
empman_comm_vacant			Vacant posts
empman_comm_total			Total
mang_comm_femp_rate		Full-time employment rate for community and social services	
empman_fin_full		Finance And Administration	Full-time
empman_fin_part			Part-time
empman_fin_vacant			Vacant posts
empman_fin_total			Total
mang_fin_femp_rate	Full-time employment rate for finance and administration		

empman_elec_full		Electricity	Full-time
empman_elec_part			Part-time
empman_elec_vacant			Vacant posts
empman_elec_total			Total
mang_elec_femp_rate		Full-time employment rate for electricity	
empman_envir_full		Environmental Protection	Full-time
empman_envir_part			Part-time
empman_envir_vacant			Vacant posts
empman_envir_total			Total
empman_health_full		Health	Full-time
empman_health_part			Part-time
empman_health_vacant			Vacant posts
empman_health_total			Total
empman_public_full		Public Safety	Full-time
empman_public_part			Part-time
empman_public_vacant			Vacant posts
empman_public_total			Total
empman_road_full		Road Transport	Full-time
empman_road_part			Part-time
empman_road_vacant			Vacant posts
empman_road_total			Total
mang_road_femp_rate		Full-time employment rate for road transport	
empman_sport_full		Sport And Recreation	Full-time
empman_sport_part			Part-time
empman_sport_vacant			Vacant posts
empman_sport_total			Total
empman_waste_full		Waste Management	Full-time
empman_waste_part			Part-time
empman_waste_vacant			Vacant posts
empman_waste_total			Total
mang_waste_femp_rate		Full-time employment rate for waste management	
empman_wastewater_full		Waste Water Management	Full-time
empman_wastewater_part			Part-time
empman_wastewater_vacant			Vacant posts
empman_wastewater_total			Total
mang_wastewater_femp_rate		Full-time employment rate for waste water management	
empman_water_full		Water	Full-time

Table 2.2: Employment for position excluding managerial positions by department: South Africa 2013

empman_water_part			Part-time	
empman_water_vacant			Vacant posts	
empman_water_total			Total	
mang_water_femp_rate			Full-time employment rate for water	
empman_other_full			Other	Full-time
empman_other_part				Part-time
empman_other_vacant				Vacant posts
empman_other_total	Total			
consumers_water	Table 7: Number of domestic and non-domestic consumer units in each province receiving selected services from municipalities: South Africa		Water	
consumers_elec			Electricity	
consumers_sewerage		Sewerage and sanitation		
consumers_waste		Solid waste management		
watersupply_inside	Table 8: Details regarding water supply in each province: South Africa	Inside the yard		
watersupply_less200m		Less than 200m from yard		
watersupply_more200m		More than 200m from yard		
water_supply_quality		proportion of water supply units inside the year		
consumers_toilet_flush	Table 9 : Number of consumer units connected to different types of toilet facilities in each province: South Africa	Flush toilet connected to public sewerage system		
consumers_toilet_septic		Flush toilet connected septic tank		
consumers_toilet_bucket		Bucket system		
consumers_toilet_vent		Ventilated improved pit latrine system		
consumers_toilet_other		Other		
toilet_quality		proportion of consumer units connected to public sewerage system		
free_policy_water	Table 10: Number of municipalities in each province which have implemented the policy relating to free basic services : South Africa	Water		
free_policy_elec		Electricity		
free_policy_sewerage		Sewerage and sanitation		
free_policy_waste		Solid waste management		
free_std_water_6kl	Table 11: Number of municipalities in each province providing free basic services at standard and other levels: South Africa	Water	6kℓ	
free_std_water_other			Other	
free_std_elec_50kwh		Electricity	50kWh	
free_std_elec_other			Other	
free_std_sewerage_moreR50		Sewerage and sanitation	More than R50	
free_std_sewerage_other			Other	
free_std_waste_moreR50		Solid waste management	More than R50	
free_std_waste_other			Other	
domconsumers_water		Water		

domconsumers_elec	Table 12: Number of domestic consumer units in each province receiving free basic services: South Africa	Electricity	
domconsumers_sewerage		Sewerage and sanitation	
domconsumers_waste		Solid waste management	
indigent_hh_total	Table 15: Number of households in each province benefiting from indigent support system over the period 2012 and 2013: South Africa	2013	
indigent_hh_water		Water	
r_indigent_hh_water		Household indigent water support rate	
indigent_hh_elec		Electricity	
r_indigent_hh_elec		Household indigent electricity support rate	
indigent_hh_sewerage		Sewerage and sanitation	
r_indigent_hh_sewerage		Household indigent sanitation support rate	
indigent_hh_waste		Solid waste management	
r_indigent_hh_waste		Household indigent solid waste support rate	
plan_IDP		Table 18: Number of municipalities in each province that have submitted an Integrated development plan and water services development plan, have a monitoring system in place for drinking water quality,	IDP Submitted
plan_WSDP	WSDP submitted		
plan_watermonitor	Monitor water quality		
plan_effluent	Monitor effluent discharges		
plan_Eskom	Funding agreement Eskom		
plan_HIV	HIV/Aids policy		
borrowing	Balance sheets	Borrowing	
cash_avail	Cash flow statements	Cash/cash equivalents at the month/year end:	
muni_subcat	Demarcation Board	Demarcation Board	
operating_balance	Income and Expenditure statements	Operating Surplus / (Deficit) - Total Revenue Less Total Exp	
opinionlabel	AGSA reports	Audit opinions	
disclaimer		sum of disclaimers 2012-2017	

Source: Table refers to Statistics South Africa (Stats SA) Non-Financial Censuses 2012-2017; National Treasury municipal finance data; and Commission derivation.

Chapter 6

Professionalising Local Government Finance: Minimum Competency Requirements and the LGSETA

Sasha Peters

Introduction

Capacity is a broad concept, encompassing aspects from finances and infrastructure to staffing, planning and goalsetting. These different elements of an organisation's capacity, when combined with the legal system, political environment and social context, determine overall performance (Horton *et al*, 2003). Currently in South Africa, performance of the LG sphere is poor whether measured from a financial management, administrative or service delivery perspective. Lack of capacity is an often-cited reason for this poor performance, particularly at the LG level.

The problem

The constitutional mandate of municipalities is to deliver basic services – water, sanitation, electricity and refuse removal – to all households, including indigent ones. To improve the performance of municipalities, government has implemented a range of capacity building interventions. Some of these interventions have been directed at improving the environmental capacity of the LG sphere. These include, among others, legislation such as the Local Government Fiscal Powers and Functions Act or regulations such as the Municipal Standard Chart of Accounts. These are broad, sphere-wide interventions which aim to create a more enabling LG environment. Relative to environmental capacity, institutional capacity is a narrower concept focusing on strengthening the municipality as an organisation. Building this type of capacity can include support programmes to improve governance and management systems and practices. Finally, there is also the individual, human capital capacity element which relates to the experience and qualifications of an employee. This is the element of capacity on which this analysis hones in.

As alluded to above, staffing, people or the human capital capacity of an organisation has a bearing on its performance. As such, the human capital strength of government departments can serve to facilitate or deter the fulfilment of public sector goals and objectives. If performance within the LG sphere is to improve, the human capital capacity on which it depends will need to be renewed. At present, high vacancy rates and the migration of skills within the public sector and to the private sector are particular challenges. As a result, plans

aimed at transforming municipalities into more responsive, accountable, effective and efficient arms of government have fallen short of reaching their goals, partly as a result of the unavailability of adequate skills. The current constrained economic environment facing South Africa has given rise to the need for stricter revenue and expenditure control with a clear emphasis on the reduction of wastage and finding more efficient and effective means of delivering services and managing municipal administrations. This requires municipalities to be staffed by appropriately skilled workers.

The inadequacy of human capital skills is nowhere more apparent than at the senior management level. Municipal managers (MMs) are the accounting officers within municipalities. The MM together with the financial management capacity within a municipality is of strategic importance. Together they are tasked with ensuring that a municipality is administratively, legislatively and constitutionally compliant with the roles and responsibilities assigned to it. Effective financial management is critical to any organisation – more so municipalities that are tasked with delivering basic services such as water, sanitation, electricity and refuse removal. In the context of LG, a lack of sound financial management will have a direct adverse impact on service delivery as there is a strong correlation between sound financial management and effective service delivery (Oberholzer, 2013).

The reality is that the challenge of inadequately skilled human capital has confronted the LG sphere since its inception in 1995/96. The most recent LG audit outcome emphasises the role that inadequate skills, vacancies and resultant instability play in the accountability crisis that exists across numerous municipalities. The human capital dilemma facing LG, particularly in respect of financial management, is evident in the following statistics:

- As at the end of June 2017, 104 (40 per cent) municipalities had acting MMs and 88 (32 per cent) had acting chief financial officers (CFOs). The largest number of acting MMs is in the North West (68 per cent), followed by the Northern Cape (67.7 per cent) and Limpopo (48.1 per cent) (National Treasury, 2017).
- As a sphere, LG has spent an estimated R3.5 billion on consultancy services. Generally consultants were used as a stop gap measure to address financial and performance management. According to the National Treasury, 230 (87 per cent) municipalities used consultants to assist them either with financial reporting or the preparation of performance information. The use of consultants is most common in municipalities in the Limpopo, North West and the Northern Cape provinces. The most common reasons underpinning the appointment of consultants were a lack of skills (60 per cent of municipalities), a combination of a lack of skills and vacancies (34 per cent) and vacancies (5 per cent). The concern with the overuse of consultants is the low level of skills transferral which implies the continued use of consultants (National Treasury, 2017)
- The Minister of Cooperative Governance and Traditional Affairs (COGTA) in his June 2018 Budget Speech indicated that 87 municipalities have been identified as being in distress and dysfunctional. Furthermore, only 7 per cent of municipalities were classified as well-functioning (Mkhize, 2018).

Given the critical role that MMs and CFOs play in the operations and strategic direction of municipalities, the situation described above has various implications including:

- A negative impact on service delivery to communities. This is critical given that municipalities are at the forefront of delivering basic services such as electricity, water, sanitation and refuse removal; and
- The ability to efficiently take basic managerial decisions is disabled. This in itself can give rise to various effects such as delays in project implementation

The existence of vacancies in strategic municipal positions has a dire impact on accountability, the level of which is significantly weakened when MMs or CFOs are not in place. There is also a strong link between the tenure of an MM or CFO and the audit outcome of a municipality. Generally instability, in terms of vacancies or incompetence in senior positions is unhelpful when trying to build institutions (National Treasury, 2017 and AGSA, 2017).

Government has implemented a range of interventions aimed at professionalising the LG component of the public service. These range from fiscal instruments such as conditional grants aimed at enhancing financial management and other types of capacity within municipalities to regulations such as the minimum competency requirements which set minimum skills standards for strategic LG positions. Sector education training authorities (SETAs) such as the Local Government Sector Education and Training Authority (LGSETA) have also been established to facilitate training and skills development interventions within the LG sphere. However, the extent to which these interventions have contributed to improving the quality and quantity of LG human capital remains questionable.

Previous Commission research and focus of current analysis

Assessing the dynamics of the LG capacity challenge is not a new topic for the Commission. In its submissions for the Division of Revenue 2010/11 and 2013/14, the Commission analysed the general challenges around LG capacity. Some of the key recommendations that emanated from the previous two research submissions included the following:

- The need for more effective enforcement of the minimum competency regulations;
- The need for an holistic approach to capacity building that goes beyond solely the individual employee, instead focussing on organisational and institutional dimensions of capacity as well; and
- The need for government as a whole to agree on a common understanding of what constitutes a lack of capacity (FFC, 2009 and 2011).

With respect to the Commission's current research agenda, the intention is to hone in on the strategic and financial management-related capacity challenges in the LG sphere with a specific focus on the minimum competency regulations and financial management training provided by the LGSETA.

This research is driven by the following questions:

- What is the capacity situation across the different categories of municipalities?
- To what extent do municipalities adhere to the regulations on minimum competency requirements?
- How does the capacity challenge affect the ability of municipalities to fulfil their core competencies?
- What incentives can be put in place to alleviate the capacity challenge?

Objectives of the chapter

Public officials represent the engine of government. For policies to be properly implemented and achieve desired outcomes, a skilled public sector work-force is needed. Inadequately skilled, poor performing public officials can endanger efficient and effective use of scarce resources and therefore the achievement of the developmental goals of a country. In addition, given the significant amount of resources that are allocated in an attempt to address the human capital capacity issue and the lack of strong impact that various interventions have had, the need for a thorough understanding of the challenge is suggested.

The objectives of this research are twofold, namely to:

- Profile the capacity challenge across the different categories of municipalities; and
- Assess the success of key interventions aimed at professionalising the LG sphere with a specific focus on the minimum competency regulations and financial management training provided by the LGSETA.

Profiling municipal personnel across South African municipalities

Chapter 13 of the National Development Plan (NDP) focuses on the need to build a “capable state” which refers to a professional public service which is capable of meeting the transformative and developmental needs of the country (NDP, 2011). In describing the state of the public service, the NDP notes that, “...uneven performance of the public service results from the interplay between a complex set of factors, including tensions in the political-administrative interface, instability of the administrative leadership, skills deficits, the erosion of accountability and authority, poor organisational design, inappropriate staffing and low staff morale” (NDP, 2011: p 364). The NDP’s summary of the challenge as outlined above, highlights the many factors that drive poor performance of the public service with skills deficits being but one dimension of the problem. It is thus critical that interventions aimed at improving performance properly diagnose the root cause of suboptimal performance and not merely its symptoms. Policymakers in the LG sphere have grappled with setting, implementing, monitoring and evaluating regulations and interventions aimed at improving the human capital capacity of municipalities for the last three decades.

Table 26 provides an outline of the number of municipal employees by province. On aggregate, South African municipalities employ 263 030 full-time employees, the bulk of which are in Gauteng, KwaZulu-Natal and the Western Cape. These three provinces also record the highest number of vacant posts as at 2017.

Table 26: Number of municipal employees as at 2017

Province	Full-time	Part-time	Vacant posts	Total
Eastern Cape	27 479	555	3 951	31 985
Free State	16 135	599	5 687	22 421
Gauteng	80 797	1 046	10 281	92 124
KwaZulu-Natal	46 948	2 797	9 470	59 215
Limpopo	13 600	462	2 090	16 152
Mpumalanga	14 011	400	2 580	16 991
Northern Cape	8 101	221	1 263	9 585
North West	12 732	864	4 004	17 600
Western Cape	43 227	2 563	5 893	51 683
Total: South Africa	263 030	9 507	45 219	317 756

Source: Statistics South Africa, 2018.

Honing in on vacancies, particularly those at a senior manager level, Table 27 disaggregates the data by position and province. Table 2 emphasises the lack of strategic leadership (defined as the positions covered in the table) particularly in municipalities in the North West, Free State, Northern Cape and Limpopo.

Table 27: Vacant senior manager posts by province as at September 2018

Province	Total municipalities	Municipal manager % vacancies	CFO % vacancies	Dir/Man: Technical services % vacancies	Dir/Man: Corporate Services % vacancies	Dir/Man: Development Planning % vacancies	Dir/Man: Community Services % vacancies
Eastern Cape	39	28.2%	12.8%	15.4%	23.1%	5.1%	20.5%
Free State	23	4.3%	26.1%	52.2%	26.1%	13.0%	43.5%
Gauteng	11	18.2%	36.4%	9.1%	27.3%	27.3%	18.2%
KwaZulu-Natal	54	13.0%	14.8%	18.5%	22.2%	22.2%	22.2%
Limpopo	27	14.8%	22.2%	33.3%	14.8%	29.6%	33.3%
Mpumalanga	20	15.0%	20.0%	35.0%	25.0%	10.0%	15.0%
Northern Cape	31	25.8%	32.3%	32.3%	38.7%	16.1%	16.1%
North West	22	18.2%	45.5%	45.5%	36.4%	50.0%	45.5%
Western Cape	30	10.0%	3.3%	16.7%	13.3%	10.0%	13.3%
TOTAL	257	16.7%	21.0%	27.2%	24.5%	19.1%	24.5%

Source: DCoG data as at September 2018, Commission calculations.

The 2018 capacity assessment published by the MDB further sketches the human capital deficiencies across the LG sphere. This is summarised in Table 28 and Figure 29:

- The majority of skilled (66.9 per cent) and most academically qualified (70.5 per cent) staff are employed in urban centres specifically the metros and secondary cities.

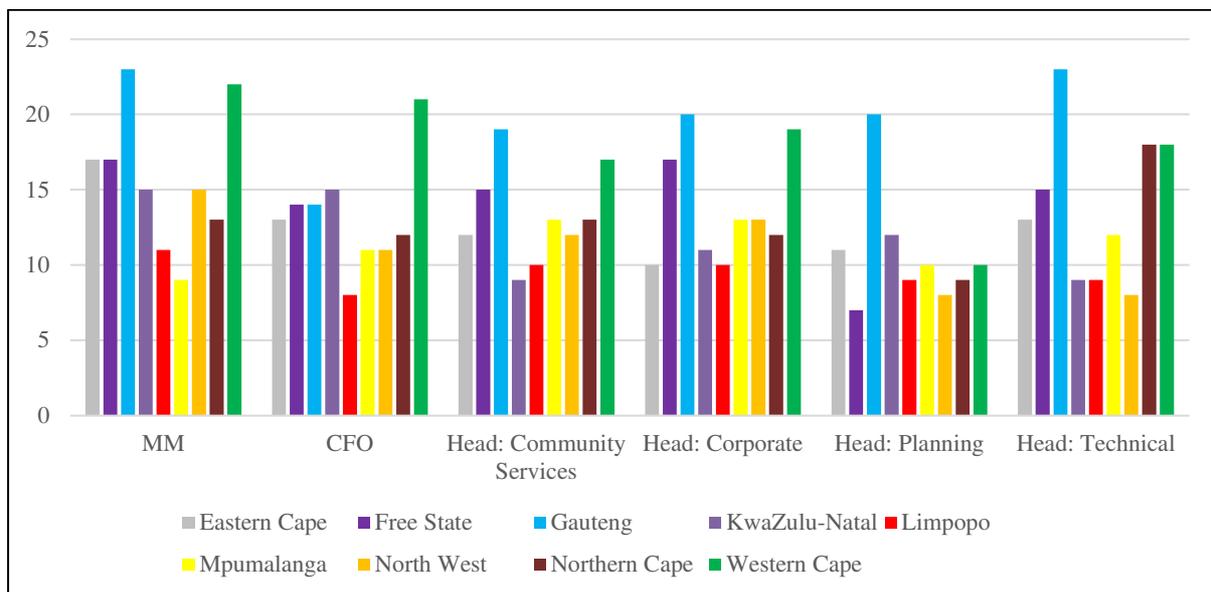
- In terms of experience, employees with the highest number of years' experience are located in either Gauteng or the Western Cape.

Table 28: Spread of professionals disaggregated by municipal category

Measure	Metro (A)	Secondary Cities (B1)	Large Towns (B2)	Medium to Small Towns (B3)	Rural Municipalities (B4)	Districts with Water and Sanitation Function (C1)	Districts without Water and Sanitation Function (C2)
Total number of professionals, technicians, associate professionals	27255	4397	2816	4796	3144	1428	3476
% of staff managers/professionals/technical	57.6%	9.3%	6.0%	10.1%	6.6%	3.0%	7.3%
Total number of staff with bachelors, honours, masters or doctorate degrees (NQF Level 7 to 10)	14714	2060	1086	1803	1757	986	1386
% of staff with bachelors, honours, masters or doctorate degrees (NQF Level 7 to 10)	61.8%	8.7%	4.6%	7.6%	7.4%	4.1%	5.8%

Source: MDB, 2018.

Figure 29: Average Years of Experience Disaggregated by Position and Province



Source: MDB, 2018.

As noted in the Commission's submission on the 2018 MTBPS (FFC, 2018), over the past five years, government has invested an average of R2 billion a year on improving capacity through various grants to municipalities, training and skills development programmes. Over the 2019 MTEF period, government will invest another R9 billion in LG capacity initiatives.

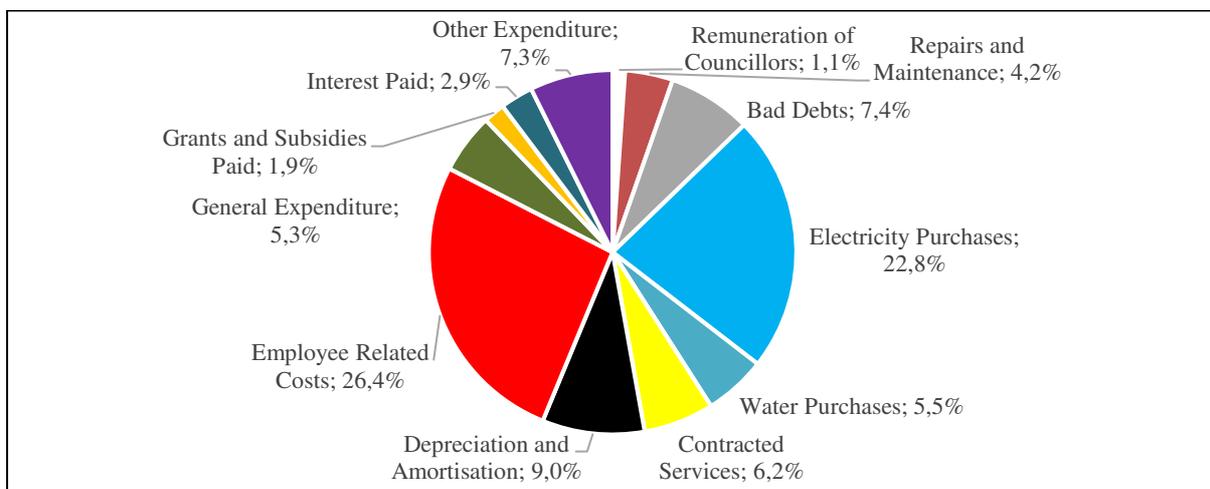
Apart from intergovernmental grants aimed at training and upskilling municipal employees, municipalities spend a significant amount of resources on employee-related costs. Employee

related costs are the main driver of municipal expenditure. In effect, municipalities spend more on their employees than on any service provided to households/clients. This is illustrated in Figure 30 and

Figure 31, which detail the proportion of municipal expenditure allocated to various municipal expenditure items and the proportion of operating expenditure allocated to personnel respectively.

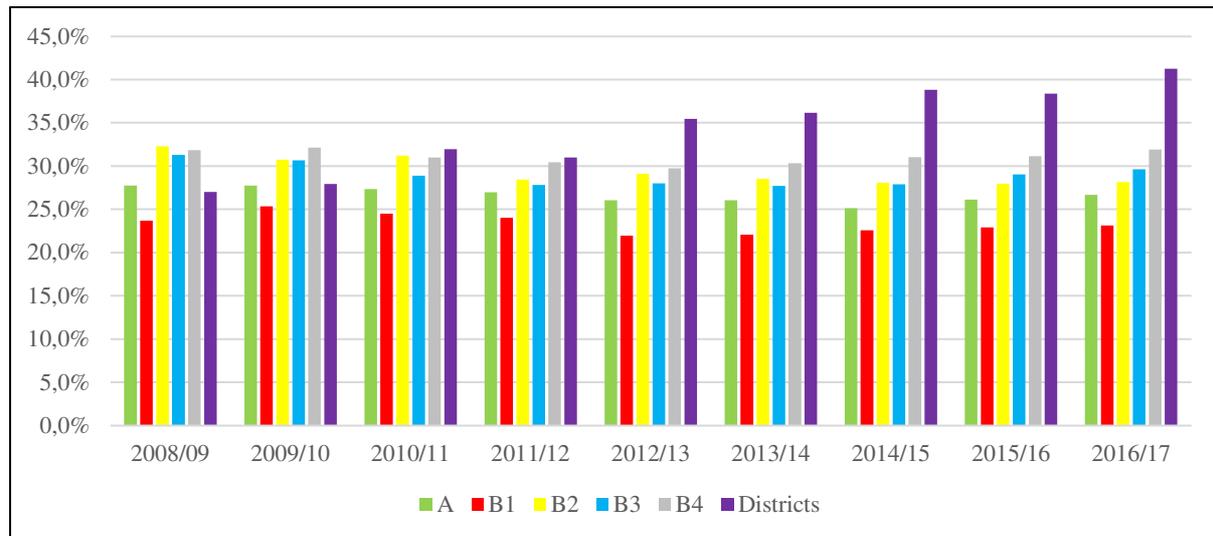
Figure 31 in particular drives home the effect of employee related costs on those municipalities with smaller budgets and who are therefore unable to absorb or spread the costs of this spending as widely as a better resourced municipality is able to.

Figure 30. Proportion of municipal expenditure allocated in respect of employee-related costs (in percentage as at 30 June 2017)



Source: Statistics South Africa, 2018.

Figure 31: Proportion of operating expenditure allocated in respect of employee-related costs (in percentage, 2008/09-2016/17)



Source: Commission calculations based on National Treasury data (2018).

Unfortunately the returns to the above investment have been poor as many municipalities continue to perform dismally – for example the 2018 MTBPS notes that in 2018/19, 113 municipalities adopted unfunded budgets, up from 83 in the previous year. According to recent audit outcomes, questionable performance exists with respect to financial management as well, with the AGSA’s latest findings indicating a deterioration in municipal audit outcomes and only 33 (or 13 per cent) of municipalities receiving a clean audit outcome (AGSA, 2018). In relation to beneficiary dissatisfaction with the performance of some municipalities it is notable that service delivery-related protests reached a record high in 2018 (compared to 2004) and have become increasingly violent (Municipal I.Q., 2018).

It is against this backdrop that government has been attempting to professionalise (through in part, the implementation of the minimum competency regulations) and provide accredited training to the LG sphere (facilitated by the LGSETA). An overview of literature on the key themes covered in this analysis follows.

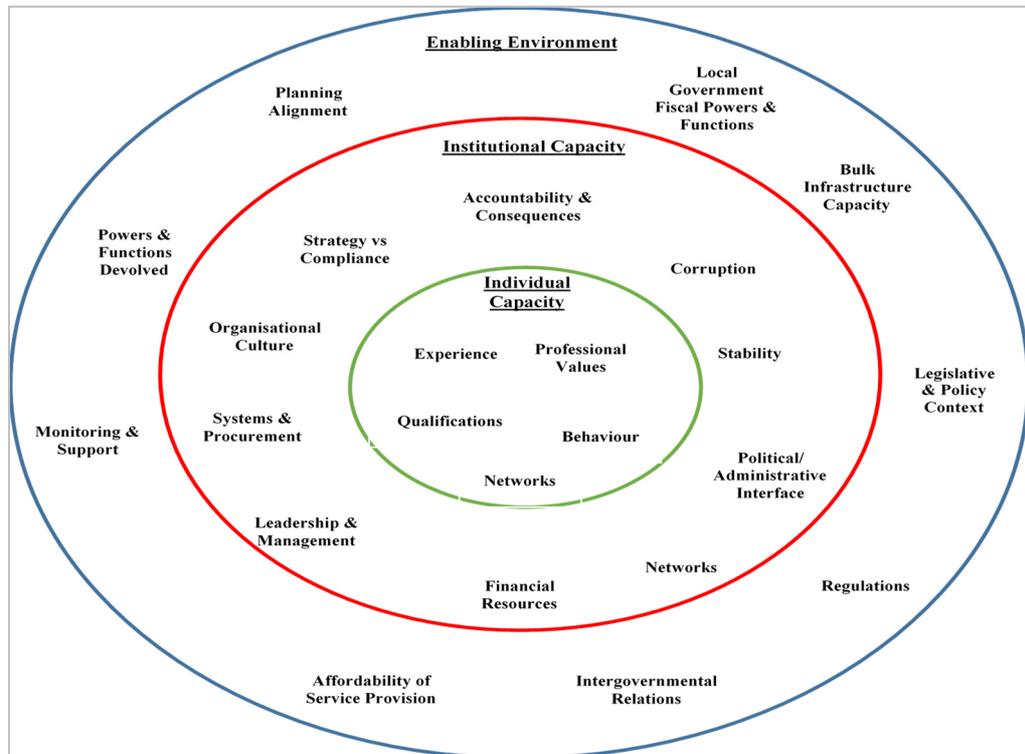
Literature review

Definition and types of capacity

Capacity can be defined as: “...the combination of people, institutions and practices that permits countries to reach their development goals” (World Bank, 1998 as cited in Lusthaus, *et al*, 1999). Public sector capacity is a multi-dimensional concept, consisting of human capacity, organisational capacity and environmental capacity (World Bank, 2005). Figure 32 further describes these three types of capacity. The first is individual/human capacity which refers to individuals with particular skills sets that are attained through education, training, experience and the formation of networks. Organisational or institutional capacity refers to groups of individuals with clear objectives, internal structures, systems (such as procurement), efficient and effective recruitment, staffing, retention and other resources working towards common objectives. Key aspects such as organisational culture and systems for accountability

and consequences fall under this type of capacity. The third type of capacity is environmental capacity which refers to the formal legislative and regulatory framework, as well as informal norms which municipalities must adhere to with regard to expenditure, revenue and reporting processes (World Bank, 2005).

Figure 32: Dimensions of Public Sector Capacity Building



Source: *Urban-Econ Development Economists (undated)*.

Based on Figure 32, it follows that in order to build sustainable capacity within a municipality, coordinated actions need to be taken in strengthening all three types of capacity – individual, organisational and institutional. Isolated, fragmented attempts in one element of capacity building might provide short term successes, but will not translate into sustained long-term capacity. It also follows that persistent efforts in training individuals to perform certain tasks prior to the organisation being ready to allow them to use such skills is a common example of a lack of integration of the individual and organisational elements of capacity building (Thomas, 2006 as cited in FFC, 2011).

Incapacity and politicisation of the public service

According to Kroukamp (2016), an assessment of the incapacity of a municipality should not be based solely on its ability to deliver services but should be extended to include its ability to spend allocated resources, especially capital budgets. This is because capital spending is often sacrificed in order to increase operational spending, specifically personnel costs. Second, incapacity should also be viewed against the extent to which consultants are being contracted as this implies a lack of adequate skills within a municipality. Third, significant underspending in high poverty areas should be regarded as a sign of being unable to meet core competencies

and finally, the number of alternative service delivery agencies suggests that municipalities do not have the capacity to carry out their roles and responsibilities (Kroukamp, 2016).

To address issues such as incapacity and poor service delivery, Madumo (2016) proposes administrative reform premised on depoliticisation of the public service. Madumo notes that “public finance management in a politicised environment is often not effective in addressing the efficient delivery of services” (Madumo, 2016: 90). Lusthaus *et al* (1999) concur, noting that power, competition for limited resources, and control, all play an important role in the capacity development process and in informing choices among capacity development options.

Managing for performance and focus on competency

Writing from a developing country perspective, Mukwena (1999) argues that while the presence of accepted performance measures are crucial to the success of the operations of any organisation, it is generally difficult to measure the performance of a public institution, such as LG. This is partly because a public institution exists to provide public services and goods which cannot be easily measured using objective criteria. He further highlights other constraints in the context of a developing country including lack of resources required to assemble the necessary data, poor monitoring, reporting and record keeping systems – all of which make it difficult to measure LG performance (Mukwena, 1999).

According to Kloot and Martin (2000) there has been a gap in the manner in which performance management has been practised and implemented in the LG sphere. They note that “...the focus in this system of LG has been on the results of council work, i.e. financial performance and to a lesser extent on how the community views performance. Local government performance measurement pays much less attention to the determinants, or means of achieving long-term, sustained organisational improvement in internal business processes, and innovation and learning. Whilst these issues are recognised as important, there are few measurement processes in place to manage performance in these areas. Strategic performance management demands an approach that recognises the importance of a focus on both results and the means of achieving these results” (Kloot and Martin, 2000: p 231).

The New Zealand experience with reforming the public sector to enhance performance highlights the importance of entrenching the responsibility of managers and the concept of accountability. According to Schick (1996), the New Zealand notion of accountability for results focuses on producing outputs, meeting targets and not the overall capacity of a department or the effectiveness of a government intervention. In this context, policy outcomes are not the concern of managers as they do not fit within the accountability framework but are rather the domain of politicians. What is clear from the literature on performance and accountability is that it is a goal that is hard to attain within the public sector. The South African LG case is exacerbated by the instability resulting from vacant posts and high turnover rates – both of which effectively disable an already weak accountability framework.

Methodology

The study relies on a multi-pronged methodological approach to fulfil its objectives. Financial (budget and expenditure) analysis is used to characterise the capacity challenges across the LG

sphere. In this respect, audited municipal data on personnel and capacity building-related spending for 2008/09 to 2017/18 was sourced from the National Treasury. Data from the COGTA, relating to vacant senior management level posts as at September 2018, was also used.

In order to fulfil the second objective of assessing the success of the minimum competency regulations and LGSETA financial-related training, the analysis relied on:

- Content analysis whereby various policy documents, government reports and regulations were reviewed. International literature on public sector capacity, professionalising the civil service and other relevant aspects were also reviewed.
- Data analysis: Raw data on municipal compliance with the minimum competency regulations were sourced from the National Treasury, which oversees compliance with the regulations. The data is provided by municipality and reflects the compliance status of municipalities (and their entities) as at October 2018. The data was analysed to ascertain the overall rate of compliance, the rate of compliance per occupation and compliance by municipal category.
- Interaction with stakeholders: In this context, national stakeholders were engaged, specifically relevant officials from the National Treasury and LGSETA. To complement the above and to ascertain the views of municipalities, an electronic survey questionnaire was distributed to all 257 municipalities using the online Monkey Survey Platform. The survey questions focussed on understanding (among other things):
 - Levels of compliance with the minimum competency regulations and the timeframe to achieve compliance;
 - Views on the suitability of training provided through the LGSETA;
 - Value of training interventions or whether capacity building interventions have led to sustained improvements in municipal performance;
 - Extent of transfer of skills acquired through training; and
 - Strategies for utilising existing capacity more efficiently.

To ensure representivity, the 257 municipalities were stratified by category and the aim was to achieve a 10 per cent response rate for each of the categories. Table 29 describes the response rate by municipal category.

Table 29: Survey response rate by category of municipality

Category of municipality	Total number of municipalities	Municipalities that responded	Response rate
Metropolitan municipalities (metros)	8	4	50%
Intermediate cities (IC)	19	2	11%
District municipalities (DM)	44	5	11%
Local municipalities (LM)	186	14	8%
Total	257	25	10%

Analysis and findings

Minimum competency regulations

Overview of the minimum competency regulations

The overarching aim of the Municipal Finance Management Act, 2003 (Act No. 56 of 2003) (MFMA) is to, “...secure sound and sustainable management of the financial affairs of municipalities and other institutions in the local sphere of government” (RSA, 2003). To this end, various clauses in the Act, namely sections 83(1), 107 and 119(1), require that selected municipal personnel meet specific competency levels as prescribed by regulation. To give effect to these regulations, the National Treasury devised the municipal regulations on minimum competency levels in June 2007.

These regulations are applicable to the following positions within a municipality or municipal entity:

- Municipal manager;
- Chief financial officers;
- Chief executive officer of a municipal entity;
- Senior managers;
- Heads of supply chain management; and
- Managers and middle managers

The regulations specify the higher education qualifications, work-related experience and various competency areas that personnel in specific posts must possess. There is some variation in terms of the requirements with respect to educational qualification and number of years of work experience with regard to CFOs, senior managers, financial officials at middle management, and supply chain management officials. The variation is based on the size of the annual budget of the municipality/municipal entity in question. For example, the larger the annual budget, the more stringent the requirements in terms of educational qualification and number of years’ of experience. Table 30 summarises the requirements as per the minimum competency regulations.

Table 30: Summary of the minimum competency regulations

Position	Higher Education Qualification		Work-Related Experience	Core Managerial and Occupational Competencies	Financial and Supply Chain Management Competency Areas	Competency Areas
	Municipalities with a budget below R1 billion	Municipalities with a budget equal to or above R1 billion				
Accounting Officer	Bachelor's degree or NQF Level 7 qualification		Min 5 years: Snr Management Level	As described in performance regulations	9 unit standards detailed in Regulation 3	Not applicable
Chief Financial Officer	Bachelor's degree in Accounting, Finance or Economics or relevant qualification equivalent to NQF Level 7	Postgraduate degree in Accounting, Finance or Economics or relevant qualification equivalent to NQF Level 8 or Chartered Accountant	Min 5 years (below R1 billion) Min 7 years (R1 billion or bigger)	As described in performance regulations	11 unit standards detailed in Regulation 5	Not applicable
Senior Managers	Bachelor's degree or relevant qualification registered on NQF as Level 7	Postgraduate degree or relevant qualification equivalent to NQF Level 8	Min 5 years (below R1 billion) Min 7 years (R1 billion or bigger)	As described in performance regulations	9 unit standards detailed in Regulation 7	Not applicable
Other Financial Officials	Relevant qualification in Accounting, Finance or Economics registered on NQF as Level 6	Relevant qualification in Accounting, Finance or Economics registered on NQF as Level 6	4-6 years (below R1 billion) 5-7 years (R1 billion or bigger)	Not applicable	Not applicable	8 unit standards detailed in Regulation 9
Heads of Supply Chain Management	Qualification in Accounting, Finance or Economics registered on NQF at Level 6	Qualification in Accounting, Finance or Economics registered on NQF at Level 7	4-6 years (below R1 billion) 5-7 years (R1 billion or bigger)	Not applicable	Not applicable	8 unit standards detailed in Regulation 11
Supply Chain Management Managers	Qualification in SCM, Accounting, Finance or Economics registered on NQF at Level 6	Qualification in SCM, Accounting, Finance or Economics registered on NQF at Level 6	2 years	Not applicable	Not applicable	6 unit standards detailed in Regulation 12

Source: National Treasury minimum competency regulations.

Initially municipalities were allowed five and a half years to fully comply with the regulations with the deadline for compliance originally set for 1 January 2013. Due to non-compliance the dates have been shifted, with municipalities being allowed more flexibility in terms of meeting the requirements. Adjustments to the level of compliance required from municipalities were also made in 2017. For example municipalities were exempted from having to comply with Regulations 15 and 18 which relate to:

- Regulation 15: deals with existing financial and supply chain management officials that do not meet the competency requirements. Initially the 2007 regulations required that existing officials comply within five years from 1 January 2008;

- Regulation 18: related to a prohibition on the employment of new financial and supply chain management officials that do not comply with the minimum competency regulations.

Coupled with the exemption is the requirement that existing and/or new financial and supply chain management officials need to attain the minimum competency levels within 18 months of the publication of the exemption. Where officials still do not comply, municipalities will be required to take appropriate action as allowed within the labour relations framework.

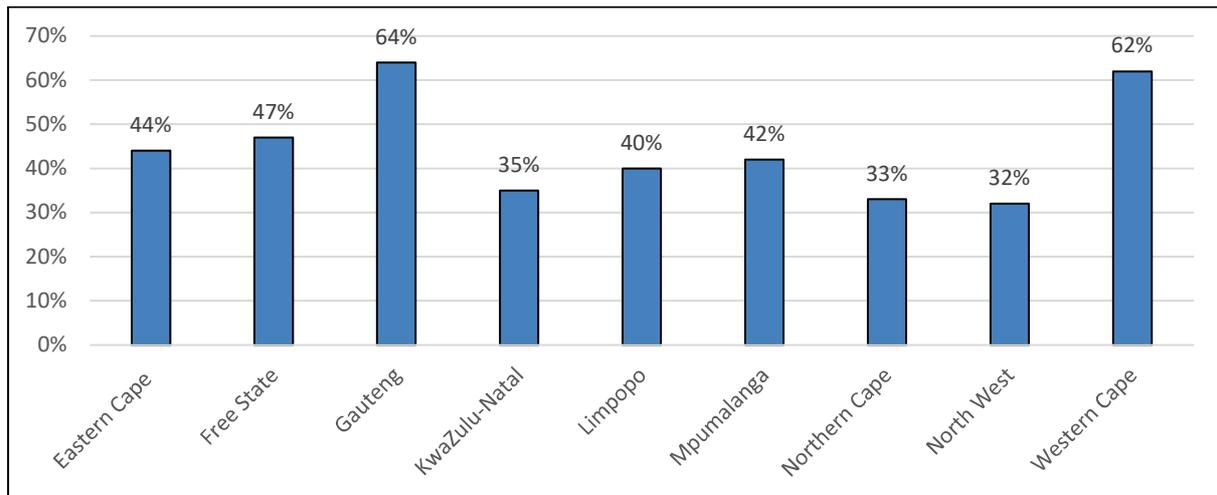
In October 2018, a number of amendments were made to the minimum competency regulations. In the main they relate to bringing about synergy between the minimum competency framework and COGTA'S regulations on the appointment of senior managers that were effected in 2014.

In terms of funding for municipal compliance with the minimum competency regulations, municipalities rely on a combination of own revenue and the Financial Management Grant (FMG) which is managed and disbursed by the National Treasury. Apart from providing support for the training of municipal financial management officials working towards attaining the minimum competencies, the FMG can also be used to fund numerous other financial management-related aspects (including, for example, to strengthen capacity and up-skill officials in the budget and treasury office, internal audit and audit committees, employ interns, to upgrade and maintain financial management systems, among others).

Commission's assessment of the implementation of the municipal regulations on minimum competency levels

Low levels of compliance prompt the need for evaluating impact and possibly a differentiated approach. Figure 33 illustrates municipal compliance with the regulations by province as at October 2018. Municipalities in the Western Cape and Gauteng show the highest level of compliance. The level of compliance in all other provinces is significantly lower, particularly in the North West, the Northern Cape and KwaZulu-Natal provinces.

Figure 33: Compliance by province (in percentage)



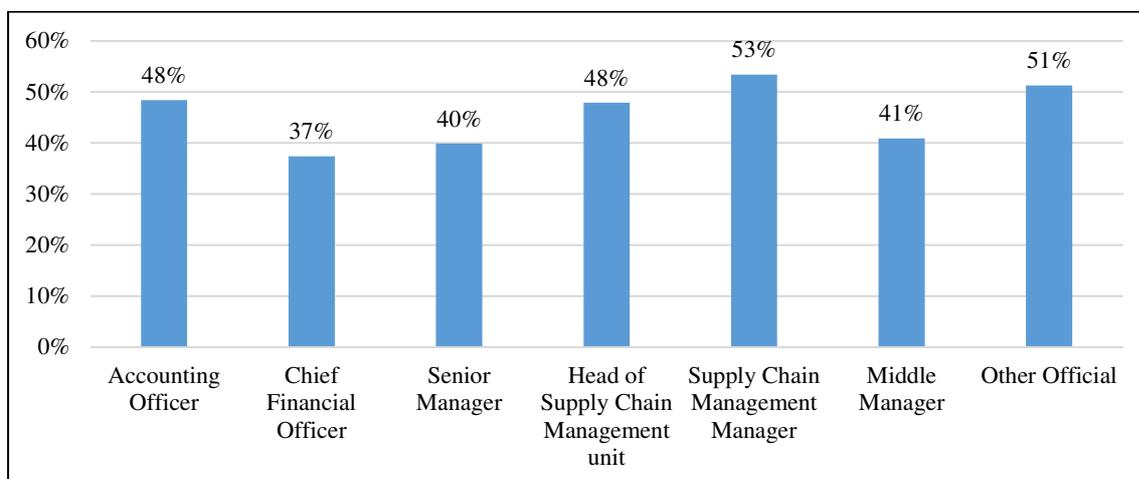
Source: National Treasury data as at October 2018, Commission’s calculations.

Figure 34 hones in on compliance with the regulations by position as at October 2018. Whereas compliance is generally low, the lowest level of compliance is with respect to the CFO position at 37 per cent.

Impact and continued relevance of minimum competency regulations

The minimum competency regulations were gazetted in 2007. An assessment of compliance confirms the slow pace at which municipalities are meeting the required standards. Given that twelve years have passed since the implementation of the regulations, there is a need for a thorough and comprehensive assessment of the impact of this intervention to date. Such an assessment should include interrogating explicit/tangible factors that have improved as a result of complying with the regulations. A further critical component of such an assessment would be to understand whether the content of the unit standards (courses) that individuals have to complete in order to be compliant, and whether they are still relevant.

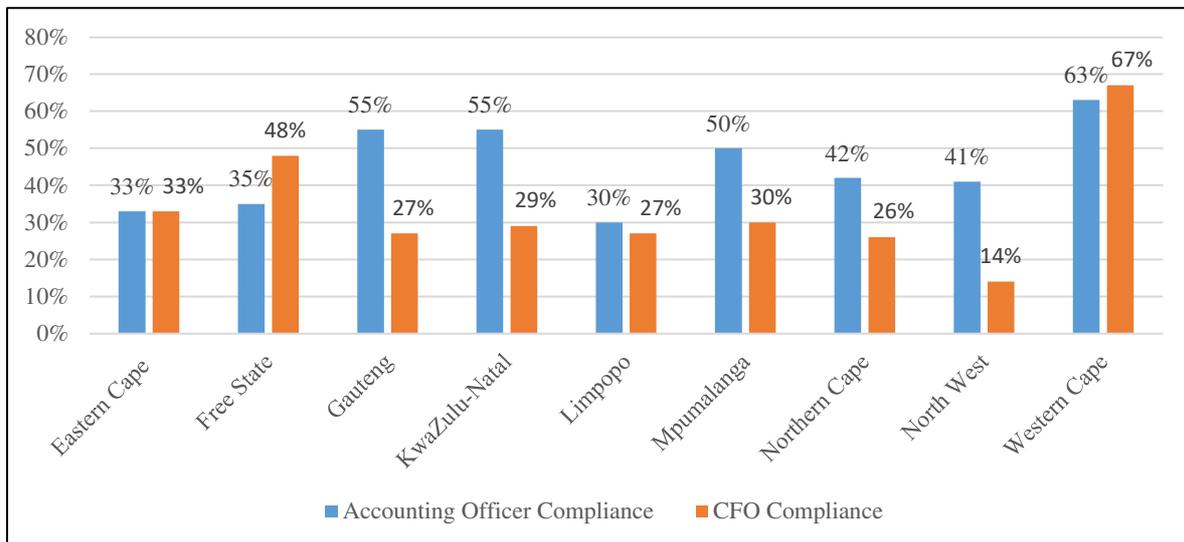
Figure 34: National compliance by position type (in percentage)



Source: National Treasury data as at October 2018, Commission’s calculations.

Figure 35 illustrates the level of compliance with respect to the two most strategic positions within a municipality, namely the MM (accounting officer) and CFO. It confirms the low level of permanent, strategic leadership in municipalities. This situation is particularly dire in the Limpopo, Eastern Cape and the North West provinces.

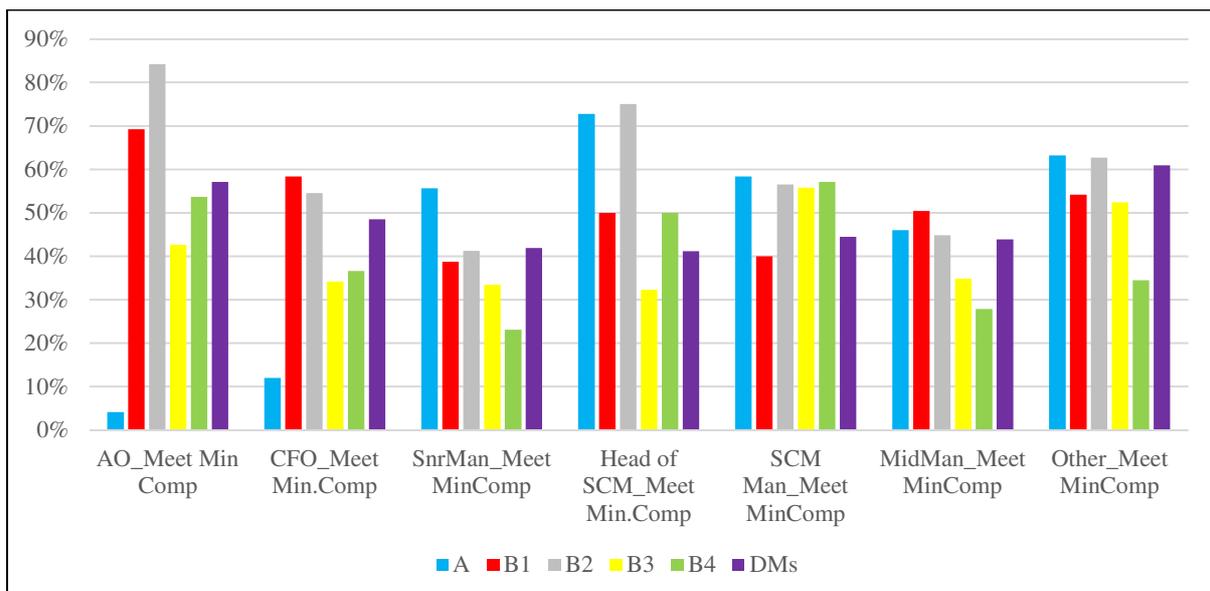
Figure 35: Accounting officer and CFO compliance by province as at October 2018



Source: National Treasury Data as at October 2018, Commission's calculations.

Figure 36 illustrates compliance by municipal category and position as at October 2018. Generally rural municipalities (specifically B4 and B3 municipalities) have a relatively lower level of compliance compared to their urban counterparts (metros, secondary cities and large towns).

Figure 36: Compliance by municipal category and position as at October 2018



Source: National Treasury data as at October 2018, Commission's calculations.

In terms of abiding by the requirements of the regulations, there is no distinction made according to municipal category – all municipalities have to meet the same criteria. Given the heterogeneity of South African municipalities, even those within the same category, there is a need to ensure a differentiated approach to reforms. While the minimum competency regulations incorporate slight variation in terms of the competency requirements based on the size of the municipal budget (for example with respect to certain positions, municipalities with smaller budgets are required to fulfil less stringent requirements in terms of academic qualification and years of experience), consideration should be given to implementing a differentiated approach or varying timelines for complying with the regulations. This could be based on municipal category or overall performance of municipalities. For example, it may not be practical to expect a municipality that is in financial distress to comply as quickly as a municipality that is performing relatively well. Compliance with competency regulations is a necessary but not sufficient criterion for good performance, and requires an holistic approach to capacity building.

In 2018, 87 municipalities were classified as dysfunctional (Mkhize, 2018). Table 36 illustrates the extent to which a selection of the dysfunctional municipalities complied with the minimum competency regulations as at October 2018. It is clear from this data that compliance of the top structure of a municipality’s leadership with the minimum competency regulations does not guarantee better performance. Put differently, a strong focus on academic competence and years of experience is insufficient to ensure good leadership and performance. There is a need to focus on the aspect of behavioural competence so as to ensure that municipalities are served by civil servants that are transparent, accountable and ethical. To this extent, there is a need for a holistic approach to capacity building so as to ensure congruency between individual, organisational and environmental capacity. So for example, the organisational and environmental elements of capacity need to be brought to bear in the sense that the processes within municipalities and the regulatory framework at the level of LG as a sphere, need to incentivise positive behavioural competencies such as accountability, integrity and ethicalness and the lack of these. For example in the case of corruption, strong consequences should follow and these are set and upheld at an organisational and environmental level.

Table 31: Sample of dysfunctional municipalities and compliance with the competency regulations

Province	Municipality	Compliance with minimum competency regulations
Eastern Cape	Alfred Nzo	<ul style="list-style-type: none"> • MM is compliant • CFO not compliant • Of 4 senior managers, 2 are compliant
	Mbizana	<ul style="list-style-type: none"> • MM not compliant • CFO is compliant • Of 4 senior managers, 0 are compliant
	Matatiele	<ul style="list-style-type: none"> • MM not compliant • CFO is compliant • Of 4 senior managers, 1 is compliant
Free State	Nketoana	<ul style="list-style-type: none"> • MM not compliant • CFO not compliant • Of 16 senior managers, 0 are compliant

	Mantsopa	<ul style="list-style-type: none"> • MM not compliant • CFO not compliant • Of 5 senior managers, 0 are compliant
	Letsemeng	<ul style="list-style-type: none"> • MM is compliant • CFO is compliant • Of 3 senior managers, 1 is compliant
Gauteng	Mogale City	<ul style="list-style-type: none"> • MM is compliant • CFO is compliant • Of 8 senior managers, 4 are compliant
	West Rand	<ul style="list-style-type: none"> • MM is compliant • CFO is compliant • Of 4 senior managers, 4 are compliant
	Merafong	<ul style="list-style-type: none"> • MM is compliant • CFO not compliant • Of 4 senior managers, 0 are compliant
KwaZulu-Natal	Umzinyathi	<ul style="list-style-type: none"> • MM is compliant • CFO not compliant • Of 2 senior managers, 1 is compliant
	Endumeni	<ul style="list-style-type: none"> • MM is compliant • CFO not compliant • Of 2 senior managers, 2 are compliant
Limpopo	Vhembe	<ul style="list-style-type: none"> • MM not compliant • CFO not compliant • Of 2 senior managers, 0 are compliant
	Makhado	<ul style="list-style-type: none"> • MM is compliant • CFO not compliant • Of 4 senior managers, 0 are compliant
	Collins Chabane	<ul style="list-style-type: none"> • MM not compliant • CFO not compliant • Of 2 senior managers, 0 are compliant
Mpumalanga	Lekwa	<ul style="list-style-type: none"> • MM is compliant • CFO not compliant • Of 4 senior managers, 0 are compliant
	Thaba Chweu	<ul style="list-style-type: none"> • MM not compliant • CFO not compliant • Of 3 senior managers, 0 are compliant
	Emalahleni	<ul style="list-style-type: none"> • MM not compliant • CFO not compliant • Of 1 senior manager, 0 is compliant
Northern Cape	Nama Khoi	<ul style="list-style-type: none"> • MM is compliant • CFO not compliant • Of 1 senior manager, 0 is compliant
	Joe Morolong	<ul style="list-style-type: none"> • MM not compliant • CFO not compliant • Of 0 senior managers, 0 are compliant
	Siyancuma	<ul style="list-style-type: none"> • MM not compliant • CFO not compliant • Of 2 senior managers, 0 are compliant
North West	Madibeng	<ul style="list-style-type: none"> • MM is compliant • CFO not compliant • Of 7 senior managers, 5 are compliant
	Mafikeng	<ul style="list-style-type: none"> • MM not compliant • CFO not compliant • Of 3 senior managers, 0 are compliant

	Matlosana	<ul style="list-style-type: none"> • MM is compliant • CFO is compliant • Of 6 senior managers, 2 are compliant
Western Cape	Beaufort West	<ul style="list-style-type: none"> • MM is compliant • CFO is compliant • Of 2 senior managers, 1 is compliant
	Cederberg	<ul style="list-style-type: none"> • MM not compliant • CFO is compliant • Of 3 senior managers, 1 is compliant
	Swellendam	<ul style="list-style-type: none"> • MM not compliant • CFO not compliant • Of 7 senior managers, 0 are compliant

Source: Commission's compilation based on COGTA, 2018 and National Treasury, 2018.

Need for a coordinated approach by government

Various role-players are tasked with the responsibility of ensuring a well-functioning, well capacitated LG sphere. Table 32 provides an overview of a selection of some of the key departments/entities involved in municipal capacity building. It is apparent just from the snapshot in this table that regulatory and training interventions are being set at a variety of points in the system. For example, whilst COGTA has primary responsibility for setting the regulatory context for municipalities, the National Treasury also has certain responsibilities in so far as intergovernmental fiscal relations (IGFR) are concerned and therefore also has certain regulatory powers relating to competency of municipal officials. Then the DPISA, through the passing of the Public Administration Management Bill, will also have the right to determine competence levels. These interventions are not always coordinated. A similar situation exists with respect to training initiatives.

Table 32: Role-players in LG capacity building

Department/entity	Mandate	Specific intervention/s
Department of Cooperative Governance (COGTA)	COGTA's mission is to ensure that municipalities fulfil their constitutional mandate in terms of the services and functions it must perform. One of the ways in which it ensures this is through building administrative capability	Sets and controls the policy/regulatory environment. Established the local government regulations on appointment and conditions of employment of senior managers (2014)
National Treasury	The National Treasury coordinates intergovernmental financial relations, manages the budget preparation process and exercises control over the implementation of the annual national budget, including any adjustments budgets. The National Treasury also performs functions assigned to it in other legislation such as the MFMA	Minimum competency regulations, established in 2007 and amended in 2018, which determine the minimum educational qualification and years of experience for specific finance-related positions
South African Local Government Association (SALGA)	SALGA's mandate is to transform LG so as to enable it to fulfil its developmental mandate. To fulfil this mandate, one of SALGA's focus areas is capacity building.	Capacity building entails assisting municipalities through strengthening policy analysis, research and monitoring of capacity and assisting municipalities in developing guidelines responding to their needs
LGSETA	The LGSETA facilitates the training and up skilling of employees and people involved in LG structures	Various training modules and skills building programmes including, learnerships, apprenticeships, and any other prescribed learning programmes that include a structured work experience component
National School of Government (NSG)	The NSG was established in aims to professionalise the public service is responsible for developing and/or providing training and development programmes aimed at developing a professional, responsive and capable public sector.	Various training modules, including LG-specific courses for example: municipal supply chain management, municipal finance management programme
Department of Public Service and Administration (DPSA)	The DPSA is responsible for establishing norms and standards relating to, among others, the functions of the public service and transformation, reform, innovation and any other matter to improve the effectiveness and efficiency of the public service and its service delivery to the public	Public Administration Management Act, 2014 (Act No. 11 of 2014). This Act allows the Minister of Public Service and Administration to prescribe minimum norms and standards regarding capacity development and training (S16(1b)). The Act also allows the Minister (in consultation with the Minister responsible for LG) to determine compulsory educational requirements for employment (S13)

LGSETA training

Overview of LGSETA

The LGSETA was established in terms of the Skills Development Act, 1998 (Act No. 97 of 1998) and is mandated to promote skills development for the LG sector. In terms of the Act, the functions of a SETA are:

- To develop a sector skills plan within the framework of the national skills development strategy;
- Implementing the sector skills plan by establishing and promoting learnerships;
- Approving workplace skills plans;
- Allocating grants in the prescribed manner; and
- Monitoring education and training in the sector.

Municipalities or municipal entities are obliged to pay one per cent of the value of their payroll as a skills development levy to the South African Revenue Services (SARS). SARS then allocates a portion of this levy to the LGSETA. The LGSETA then makes funding available to qualifying municipalities through two grants, namely the mandatory grant and the discretionary grant:

- **Mandatory grant:** this grant is equivalent to 20 per cent of the skills development levy and the allocation to municipalities is based on the submission of municipal workplace skills plans (which indicates the training needs/interests of municipalities) and annual training reports. Since 2000, the LGSETA has disbursed over R1 billion through the mandatory grant. For those municipalities that do submit compliant workplace skills plans, one of the key weaknesses of the current system is that the allocation is not ring-fenced to fund training and capacity building only but can also be used for operational expenditure (Davies, undated).
- **Discretionary grants:** the second type of grant is the discretionary grant which is aimed at providing funding for building of scarce or critical skills in the LG sector. Municipalities apply to be awarded this grant. Municipal financial viability is one of the strategic priority areas funded via the discretionary grant. The projects falling under the financial viability priority area include: property valuation, audit and procurement and municipal finance.

In terms of financial management-related training, the LGSETA offers numerous courses. The most popular ones include:

- Certificate in municipal financial management;
- National diploma in public finance management and administration; and
- Further education and training certificate in municipal finance and administration.

The Commission's assessment of LGSETA

Efficiency of LGSETA internal processes

In 2013, the LGSETA was placed under administration for two and a half years (from March 2013 to September 2015) due to numerous performance challenges. Moving out of the

administration period, the LGSETA has begun to turn around its performance. However some challenges seem to linger and which may have an impact on the LGSETA's ability to efficiently facilitate training and development in the LG sector. From an assessment of the LGSETA's annual reports of 2015/16, 2016/17 and 2017/18, the following is noted:

- The learning programme is one of the key programmes through which the LGSETA carries out its mandate. The purpose of the programme is to, “improve the skilled workforce available in the LG sector through facilitating the provision of quality training” (LGSETA, 2018). For all three years reviewed, the LGSETA has failed to fulfil key performance indicators related to this programme. Across all three years reviewed the AGSA raised findings on the usefulness and reliability of reported performance information. This raises the accuracy of the extent to which training interventions have been carried out in the LG sector. The implication of this is that incorrect numbers provide a false basis for decision-making and an inaccurate view of training in the LG sector provided by the LGSETA.
- Underspensing of funds (referred to as cash reserves in the annual report): As at March 2018, the LGSETA recorded underspensing of R150 million. The annual reports for 2016/17 and 2015/16 cite underspensing of R6.4 million and R50.3 million respectively (LGSETA, 2018 and 2017). As noted in the 2018 annual report, the underspensing was driven primarily by “slow-moving projects” (LGSETA, 2018). Slow-moving projects appear to be happening largely as a result of delays in payments and the submission of non-compliant documentation by municipalities. Given that the main purpose for the existence of the LGSETA is to capacitate municipalities, consideration should be given to providing technical capacity to assist municipalities in complying with LGSETA requirements. It should also be questioned whether it is necessary to slow down the process to such an extent that the LGSETA is, at the end of the day, unable to spend its allocation.

Governance in the LGSETA

As alluded to earlier, there are numerous departments and institutions within the LG sphere that have the same goal of bringing about a well-functioning LG sphere. The LGSETA is one such body. However the LGSETA reports to the Minister of Higher Education and Training and as such this governance arrangement can serve to dilute the level of accountability that the LGSETA should have in terms of the objectives and aims of the primary LG sector department (i.e. COGTA) as well as municipalities in general.

The high cost of training presents a challenge to some. Based on interactions with the LGSETA, it seems that a key constraint is that the municipal financial management courses, which are the most popular courses, are too expensive in some of the institutions that offer them. As a result of the pricing, many municipalities are unable to “top up” the money received via the LGSETA grant funding and are then unable to register their employees for those courses. Consideration should be given as to how the LGSETA can work together with other key role-players and training providers to ensure the provision of well-priced, high quality training interventions.

Conclusion and recommendations

The efficiency and effectiveness of the public sector is critical to ensuring that the developmental goals of a country are achieved. The South African LG sphere with its 257 municipalities is beset to varying degrees by the challenge of poor human capital capacity. The preceding analysis focussed on compliance with the minimum competency regulations and the role of the LGSETA. While the findings point to certain adjustments that need to be applied to the regulations and the operation of the LGSETA, the overwhelming conclusion from this analysis is that training interventions and regulations to ensure minimum standards and benchmarks for LG human capital capacity is not a panacea for poor service delivery and financial management in the sphere. Capacity building and competency regulations are but one dimension of what is required to improve public sector performance.

Recommendations

With respect to the minimum competency regulations, the following recommendations are proposed:

1. The Minister of CoGTA (i) defines the roles, responsibilities and governance arrangements underpinning the building of a quality Local Government civil service, and (ii) through MoUs improves and strengthens coordination among government departments that are building capacity of municipalities in order to avoid duplication and gaps between different role-players, while paying specific attention to the requirements of any particular municipality receiving intervention.
 - 1.2 Based on an assessment of the specific needs of a municipality, the Minister of Finance and Minister of CoGTA jointly, and in consultation with provincial governments, should prioritise technical support for new systems, innovative business process redesign and change management.
 - 1.3 The Minister of Finance should conduct regular assessments of the minimum competency regulations to determine their impact and whether there are tangible improvements as a result of complying.

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Chapter 7

A Review of Municipal Dys functionality in South Africa

Sabelo Mtantato

Introduction

The Constitution of the Republic of South Africa, 1996 (Act No. 108 of 1996) (Constitution), makes provision for the establishment of three spheres of government (national, provincial and local) which are distinctive and independent but interrelated. With respect to the LG, the Municipal Structures Act, 1998 (Act No. 117 of 1998) (MSA) makes provision for a single-tier and a two-tier system. The former is limited to metropolitan municipalities, and the latter, which covers the other geographical areas, is made up of two layers, i.e., district municipalities (DMs) and local municipalities (LMs).

LG, being closest to the citizens, is responsible for the delivery of basic infrastructure and services. According to the MSA, metropolitan municipalities are responsible for the provision of all four of the basic services (water, electricity, refuse removal, and sewage collection and disposal) while DMs and LMs are structured so that they share the provision of these services. Municipalities, because of their vital role with respect to the delivery of basic infrastructure and service, should remain in good standing to obviate service delivery being compromised.

Problem statement

In South Africa, municipalities are imperative as they are responsible for the delivery of basic infrastructure and services, including water, sanitation, electricity and refuse removal. However, often municipalities fail as a result of a number of challenges. A municipality that is able to deliver on its mandate is referred to as functional. In his 2018 budget statement, the former Minister of Cooperative Governance and Traditional Affairs (COGTA), Zweli Mkhize described a “well-functioning municipality” as one characterised by stability, a functional council and oversight structures, with consistent spending of the capital budget, unqualified audit outcomes and good financial management (Mkhize, 2018). According to COGTA in 2018, 87 out of 257 municipalities (equivalent of 34 per cent) were declared either dysfunctional or in financial distress¹². It should also be noted that this does not imply that the remaining 170 municipalities are functional as many were identified to be at risk of dysfunctionality to varying degrees. Only seven per cent were considered to be well-functioning. This is a concern as a “dysfunctional municipality” deprives citizens with respect to service delivery and fails to improve economic and social conditions.

¹² See list of dysfunctional/financial distressed municipality from COGTA at <http://www.cogta.gov.za/?p=4088>

Aim and objectives of this chapter

The main aim of this chapter is to interrogate the concept of municipal dysfunctionality in South African municipalities. The specific objectives of this research chapter are to:

- Analyse and interrogate the concept of municipal dysfunctionality as used by various departments and institution in South Africa;
- Examine the key drivers leading to dysfunctional municipality; and
- Make recommendations and propose a consolidate framework for assessing dysfunctionality.

Literature review

This section reviews the international and South African literature on dysfunctional municipalities.

International literature

Municipalities that are dysfunctional and/or in financial distress often fail to provide basic services. The inability of such municipalities to function optimally is attributed to a number of reasons. The literature cites the following categories as key drivers of dysfunctional municipalities among others:

Efficiency

Inefficiency is one of the common reasons for the dysfunctionality of municipalities and could result in total dissolution if not addressed (Beck, 2017). The inability of a municipality to provide basic services at a lower/reasonable cost and of higher quality leads to inefficient use of limited resources and community demonstrations of frustrations.

Fiscal distress

Fiscal distress is a result of a combination of factors. It is difficult to isolate fiscal distress as an independent reason for municipal dysfunctionality. Financial distress is exogenous and can be due to a number of factors which include the shrinking tax base of a municipality, declining population and increased demand for services. Financial distress could cause service disruptions leading to citizen discontentment and reduced tax revenue which exacerbates financial distress.

Tax burden and tax base

According to the Pennsylvania Economy League (2017), a shrinking tax base and increasing expenditure contributes to municipal fiscal distress and dysfunctionality of municipalities. Furthermore increasing the tax burden also affects the functionality of municipalities.

Financial management

International literature also reveals financial mismanagement as one of the key reasons for a dysfunctionality of a municipality. Linked to this is fiscal insolvency. The poor financial management of a municipality could lead to a situation where a municipality may find itself in too much debt.

South African literature

Some of the root causes of financial distress and dysfunctional municipalities include inadequate human resources, shortage of necessary and relevant skills, and an unethical organisational culture.

Inadequate human resources

Inadequate human resources capacity in municipalities has been identified in a number of studies as one of the aspects negatively affecting the overall performance of LG, and this is reflected in ongoing high vacancy rates (Deloitte 2012:3, among others). At the end of the 2011 financial year, for example, the Municipal Demarcation Board indicated that an average of 32.5 per cent of funded posts within the LG sector were vacant. A major concern is that vacant posts include very critical positions such as MMs and CFOs. In some instances, there is a high number of acting MMs as well as acting CFOs. When either of these key positions are vacant, it is likely that a municipality will suffer from financial management and productivity challenges affecting overall efficiency and service delivery of a municipality.

Shortage of necessary and relevant skills

For effective and efficient service delivery, employee skillsets are the most valuable asset as it takes qualified and skilled individuals to deliver services efficiently. Within the LG sector, the shortage of such skilled employees (both administrative and technical capacity) has been identified as one of the challenges affecting the effective and efficient delivery of services (Deloitte, 2012). Some reports indicate that a significant number of individuals in key positions such as MMs, CFOs and technical managers lack appropriate qualifications. The shortage of skills in the sector is exacerbated by the lack of ongoing training and development to enhance efficiency and effectiveness of staff. A study undertaken by the Public Service Commission (PSC, 2009) revealed that a significant number of leaders had not identified the technical training needs of personnel in their performance development plans. This presents a challenge as municipalities would be likely to accept and implement any training and development programme designed and implemented by, for example, the national government without adjusting it to be relevant to municipal's employees. COGTA (2009) noted that in some instances, recruitment and appointment of personnel within the LG sphere seems to be politically motivated, with disregard to the candidate's technical competencies and abilities.

Unethical organisational culture

Unethical practices were also identified as contributing to the dysfunctionality as they negatively affect efficiency and effectiveness. While it is generally agreed that the public sector has sufficient guidelines, legislation and regulations to ensure that ethics are adhered to, non-compliance, from recruitment to the application of supply chain management processes, is rife (PSC, 2011). Some municipalities were found to be lacking formal processes requiring members to declare potential conflicts of interest during recruitment and selection processes, creating an opportunity for favouritism and nepotism. In some instances, municipalities lacked

security vetting processes for key positions such as CFOs and those in supply chain management (PSC, 2011).

According to the Commission (FFC, 2016), the functionality of a municipality is a combination of endogenous and exogenous factors¹³. The Commission noted that internal issues pertaining to institutional management, financial management, governance and service delivery are some of the key factors determining functionality or dysfunctionality of a municipality. Apart from these factors, the Commission also noted that municipal dysfunctionality can also be as result of managerial gaps, bad choices or instability at senior levels. Issues that are outside the municipality's control include political and financial factors. Political issues involve the composition of the council (number and representatives of political parties and coalition status). Financial issues include the quantum of funding allocation or transfers that a municipality has control over.

Research methodology

The research has employed both qualitative and quantitative techniques to achieve the stated objectives of the study. Qualitatively, the study used the case-study approach where selected municipalities (DMs and LMs) were visited and relevant officials interviewed to obtain a full understanding of the causes of dysfunctionality, including financial distress in these municipalities. Other key stakeholders that were consulted include officials from the National Treasury, COGTA and SALGA. Quantitatively, the study utilised annual reports from the selected municipalities and other sources of data including Stats SA to review a number of issues such as vacancies in key positions and the financial performance of the selected municipalities.

Case study of selected municipalities – sampling and justification

Municipalities in South Africa are divided into metropolitan municipalities (category A), local municipalities (category B) and district municipalities (category C). For the purposes of this study, the sample consisted of DMs and LMs¹⁴.

The number of DMs and LMs differs by province, with some provinces having as few as two DMs and 6 LMs (Gauteng), while some have as many as 10 DMs and 43 LMs (KwaZulu-Natal) as illustrated in Table 33.

¹³ Financial and Fiscal Commission paper presented to the Municipal Demarcation Board Conference on Demarcation and Spatial Transformation, 23-24 June 2016

¹⁴ Category A constitutes all metropolitan municipalities; category B consists of local municipalities (LMs); and category C comprises district municipalities. LMs in category B are further classified into B1, B2, B3 and B4¹⁴, while DMs in category C are further divided into C1 and C2. The difference between C1 and C2 is that the latter are water services authorities and the former are not. Metros do not fall under any district municipalities and are therefore excluded from the study.

Table 33: Number of DMs and LMs per province

Province	Number of DMs	Number of LMs
KwaZulu-Natal	10	43
Eastern Cape	6	31
Northern Cape	5	26
Western Cape	5	24
Limpopo	5	22
Free State	4	18
North-West	4	18
Mpumalanga	3	17
Gauteng	2	6
Total	44	205

In 2018, COGTA released a list of 87 municipalities, including DMs and LMs, that are dysfunctional or distressed. This study has focussed on these municipalities. Table 34 shows the breakdown of dysfunctional or distressed municipalities per province.

Table 34: Number of dysfunctional and financially distressed municipalities per province

Province	Number of municipalities
KwaZulu-Natal	18
Eastern Cape	14
Limpopo	13
North-West	10
Northern Cape	8
Free State	7
Western Cape	7
Gauteng	6
Mpumalanga	4
Total	87

Source: COGTA Back to Basics document - http://www.cogta.gov.za/?page_id=386

The three provinces with the highest number of dysfunctional/distressed municipalities were selected for the study, namely, KwaZulu-Natal, the Eastern Cape and Limpopo with 18, 14 and 13 dysfunctional municipalities respectively. These provinces together account for almost 52 per cent of dysfunctional municipalities.

It has been further proposed that at least one dysfunctional DM and one or two dysfunctional LMs (under that DM) be chosen for this study in each of these three provinces. Table 35 shows municipalities selected in the three provinces.

Table 35: Sample of dysfunctional/financial distressed municipalities surveyed

Province	District municipality	Local municipality	Total number of municipalities
Eastern Cape	Alfred Nzo	Matatiele	3 (1DM and 2LMs)
		Mbizana	
KwaZulu-Natal	Umzinyathi	Endumeni	2 (1DM and 1LM)
Limpopo	Vhembe	Makhado	3 (1DM and 2LMs)
		Collins Chabane	
			8 municipalities

In the Eastern Cape, only Alfred Nzo DM is classified as dysfunctional and two of its four LMs. In KwaZulu-Natal only one DM, uMzinyathi, and one of its four LMs are classified as dysfunctional. In Limpopo, the Vhembe district municipality with both its LMs (Makhado LM and Collins Chabane LM) are classified as dysfunctional.

Research findings

Research findings for the study are reported in two different parts, with the first part reporting findings from engagements with key stakeholders including the National Treasury, SALGA, COGTA and the Municipal IQ. The second part summarises findings from the visited municipalities.

Summary of findings from engagements with key stakeholders

The key issue that emerged from the Commission’s analysis is the lack of a common, government-wide definition of a dysfunctional municipality. This is despite COGTA’s characterisation of a well-functioning municipality. Generally, the word “dysfunctional” is implied to refer to all municipalities that are not functioning normally or as expected. This approach is conceptually flawed as many municipalities are neither functional nor dysfunctional, but somewhere in between.

In line with the current approach, a dysfunctional municipality is therefore simply characterised by the failure to deliver expected outcomes and comply with key processes. While a number of institutions acknowledge the dysfunctionality of municipalities and some refer to municipalities in the “red zone” or in the intensive care unit (ICU), the specific indicators used to reach that conclusion, and the standard of delivery against which the identifying indicators are measured, differs. A more discerning and nuanced approach is needed, given that the categorisation is meant to guide specific interventions in municipalities across the country in order to improve their performance.

COGTA has defined functional municipalities on the basis of three factors,¹⁵ namely good financial management, good governance, and the ability to deliver services. Further engagements with COGTA revealed that in determining the 2018 list of 87 dysfunctional or

¹⁵ See COGTA Back to Basics document - http://www.cogta.gov.za/?page_id=386

distressed municipalities, it had to take into account the following financial management factors as well:

- Municipalities identified as being in financial distress by the National Treasury;
- Those municipalities banking with VBS Mutual Bank; and
- The inability of municipalities to pay service providers such as Eskom.

Interactions and engagements with an official from SALGA revealed that SALGA uses four pillars to determine dysfunctionality or municipalities in the “red zone” for the purpose of implementing its municipal audit support programme. The four pillars are leadership, institutional capacity, governance, and financial management. The National Treasury, on the other hand, relies more on financial indicators to determine dysfunctionality.

Municipal IQ¹⁶ has also compiled an index on dysfunctional municipalities using seven key variables that relate to service delivery, governance and financial management. According to Municipal IQ, if a municipality is flagged for fewer than three indicators, it is regarded as doing well and for more than three indicators, it is placed on a watch list. Municipalities with four flags are placed in a “high-care unit” and the ones with five or more flags enter the “ICU” list. Table 36 shows different indicators taken into consideration by different institutions to determine dysfunctionality.

¹⁶ See Municipal IQ – Municipal Intensive Care Unit-
http://www.municipaliq.co.za/index.php?site_page=icu.php&ShowVariables=1

Table 36: Indicators of municipal dysfunctionality by different institutions

Institution	Indicators	Institution	Indicators
National Treasury	<ol style="list-style-type: none"> 1. Cash coverage 2. Cash balance 3. Reliance on capital grants 4. Overspending on operational budgets 5. Underspending on capital budgets 6. Debtors growth 7. Debtors percentage of cash 8. Creditors percentage of cash 	COGTA	<ol style="list-style-type: none"> 1. Service delivery (access to piped water, sanitation, electricity, refuse removal and service delivery maintenance) 2. Governance (issues of Section 39 intervention and unauthorised, irregular and fruitless and wasteful expenditure) 3. Financial management 4. Current support (MISA)
SALGA	<ol style="list-style-type: none"> 1. Institutional capacity 2. Leadership 3. Financial management 4. Governance 	Municipal IQ	<ol style="list-style-type: none"> 1. Backlogs on four basic services; 2. Ability to deliver to indigent support relative to poverty levels; 3. Spending per capita lagging peers; 4. High discrepancy between actual and planned expenditure; 5. Underperformance on audit outcomes relative to peers; 6. Underperformance on compliance and governance index (CGI) relative to peers; and 7. Service delivery protests

Source: FFC Compilation based on COGTA Back to Basics document -

http://www.cogta.gov.za/?page_id=386; *Municipal IQ – Municipal Intensive Care Unit*-

http://www.municipaliq.co.za/index.php?site_page=icu.php&ShowVariables=1

One of the key challenges with the absence of a government-wide definition of dysfunctionality is that it creates contradictions within the system. For example, in 2018, Ray Nkonyeni, a municipality in KwaZulu-Natal was on COGTA’s list of dysfunctional municipalities. In 2019, however, the same municipality passed the test and qualified to receive the Integrated Urban Development Grant proposed by the National Treasury. This grant is allocated only to selected municipalities that have demonstrated good performance in areas such as governance, spending and reporting. In essence, National Treasury made a grant to a municipality considered “dysfunctional” by COGTA.

Summary of findings from visited municipalities

Seven of the eight selected municipalities were visited. However, a meeting with Vhembe DM did not materialise due to political instability. The study from selected municipalities confirmed issues reflected in Table 35 as key drivers of municipal dysfunctionality.

Table 37: Responses from municipalities on key drivers of municipal dysfunctionality

Issue	Number of municipalities raised this as a key factor
High vacancies and staff turnover in critical positions	7
Political instability	6
Lack of coordination in the intergovernmental relations and support to local municipalities	4
Re-demarcation	3
Lack of capacity to investigate irregular expenditure	3

Source: Commission compilation from interviews

High vacancy rate and staff turnover on critical positions

High staff turnover (particularly at senior level including MMs, CFOs and other senior managers) has been cited by DMs and LMs as one of the key drivers towards dysfunctional municipalities. This came across strongly in all seven visited municipalities and has been regarded as a major root cause or driver of dysfunctionality. In some municipalities, at the time of visits, both MMs and CFOs were acting. In fact, in two out of seven cases, MMs and CFOs who were contacted late in 2018 to arrange for municipal visits had left or been suspended by January/February 2019. Through municipal visits and interviews, the interviews found that MMs, CFOs and other managers in senior positions in most cases do not stay for the full five years of their contracts. This is driven mainly by uncertainty with respect to their jobs after their contracts have expired so they start looking for other opportunities before five years.

Political instability

Political instability and political differences affect the sitting of council meetings; this delays decisions and resolutions that need to be taken. This affects finalisation and passing of budgets and implementation of project among other things. Some of the visited municipalities indicated that council was unable to sit and make key resolutions and decisions for a long period even though there had been improvements recently (6 out of 7).

Lack of coordination in the intergovernmental relations and support for local municipalities

Some of the visited municipalities indicated that while there are some consultations between DMs and LMs, there are instances where DMs send contractors without prior engagements (particular on water and sanitation services) (4 out of 7). Another issue related to intergovernmental relations is a challenge faced by local municipalities with respect to the implementation of indirect conditional grant where a province or national departments implement projects without engaging LMs (3 out of 7). This presents a challenge as LMs remain responsible for the maintenance of assets delivered by districts or other spheres of government.

With respect to support from COGTA, some municipalities indicated that there is minimal support and are of the view that there are instances where it is reduced to monitoring and

evaluation with little assistance on other challenges faced by local municipalities. The role of DMs in most cases is only the provision of water and sanitation to LMs with no other forms of assistance. LMs that do not have infrastructure delivery master plans indicated that are not receiving any assistance from either DMs or COGTA (3 out of 7).

Re-demarcation

Moving a LM from one district to the other has been highlighted as one of factors affecting optimal functionality of a municipality since it breaks the continuity and implementation of projects (3 out of 7). For example, Mbizana LM has been moved from Wild Coast DM, to OR. Tambo DM and is currently under Alfred Nzo DM, while Matatiele LM has been moved from Sisonke DM to Alfred Nzo DM. Moving a LM from one district to the other also affects financial resources.

Lack of capacity to investigate unauthorised and irregular expenditure

Where issues of unauthorised and irregular expenditure have been found in a municipality, either internally by municipal public account committees (MPAC) or by the AGSA, such issues need to be investigated. In some instance, municipalities indicated the lack of capacity to undertake such investigations as a biggest challenge (3 out of 7). This explains the reason why some municipalities are not investigating issues of irregular and unauthorised expenditure as recommended by the AGSA.

Summary of findings

Based on the Commission's interviews with municipalities (i.e. the case studies selected from KwaZulu-Natal, Eastern Cape and Limpopo), there are two key elements that are currently not considered (by different institutions in Table 36) when classifying municipalities as dysfunctional – these are political management¹⁷ and human resources, which include high vacancy rates in key positions such as Chief Financial Officers and Municipal Managers. Following on from this, Figure 37 illustrates the factors that the Commission proposes should be used to determine the functionality status of municipalities, namely: financial management, governance, ability to deliver services, leadership, political management and human resources.

¹⁷ In this context, political management refers to how municipal councils are politically constituted and how such arrangements impact on the efficient and effective functioning of a municipality. It is about how the political composition of municipal councils impacts on their day to day activities, e.g holding of meetings in order to take key and strategic council decisions. Political management challenges (e.g. coalition-run municipalities) have been identified as one common hindrance to the smooth functioning of municipalities. In this context, political management should be viewed differently from governance which refers to the effectiveness of municipal structures (e.g. mayoral committees, municipal public accounts committees and audit committees) in exercising their fiduciary duties, and in particular, holding the executive to account. Usually if these structures are not able to hold the executive to account (e.g. due to poor capacity), the council will be rendered dysfunctional.

Figure 37: Indicators and areas determining functionality status of municipalities



The factors contained in the proposed definition are interrelated – so for example, poor governance could lead to poor financial management and possible bankruptcy of a municipality, resulting in the inability to deliver services.

Based on Figure 37, the Commission is therefore of the view that municipal functionality refers to the maintenance and performance of systems, processes and practices in governance, service delivery, financial management, leadership, political management and human resources within a municipality that yield high performance in terms of its legislative mandate. Therefore if a municipality fails in any one or more of the factors indicated in the definition, it should be classified as dysfunctional. Importantly the Commission believes that factors beyond the influence of municipal management, such as historical backlogs in the provision of basic services and demographic reliance on capital grants, should not be considered for the purpose of classifying a municipality as dysfunctional.

In the past, the government has intervened in various ways in cases where municipalities appeared to have challenges relating to their functionality. While a detailed study has not been undertaken by the Commission with respect to the effectiveness of interventions, it appears that some of the interventions have failed to improve municipal performance. It is anticipated that the conditions in a municipality should improve after an implementation of an intervention. A municipality that continues to struggle after an intervention indicates the ineffectiveness of a programme that has been implemented. With respect to one of municipalities from the case study, uMzinyathi DM, there have been various interventions as shown in Table 38.

Table 38: Current and previous Section 139 interventions on LG over the period 2005-2014

Name of municipality	Year of Intervention	End of intervention	Nature of problem
Alfred Nzo District Municipality	01 April 2009	31 October 2009	Governance and Financial Management
Umzinyathi District Municipality	01 December 2007	01 June 2009	Financial Management
	01 April 2013	01 December 2013	Service delivery
	12 October 2016	15 April 2017	Sec 139 (1) (b)
	2018	Currently	Financial Management (Sec 139 (1)(b))

Source: Commission compilation from interviews

Conclusions and recommendations

Various institutions including the National Treasury, COGTA and SALGA are concerned with the functionality of municipalities and acknowledge the existence of dysfunctional municipalities. However, due to the lack of a commonly accepted definition of functionality, and by implication also of dysfunctionality, and a set of attendant measurable indicators, the lists of dysfunctional municipalities and their order of priority differ, depending on the institution undertaking the assessment. The research also reveals that key drivers for dysfunctional municipalities include a high vacancy rate or staff turnover in critical positions. This high vacancy rate leads to a number of other challenges including poor spending on both operational and capital budgets. Other drivers of dysfunctionality include political instability. Interventions by other key departments on addressing dysfunctions are constrained by a lack of coordinated and implementation of capacity building plans.

Recommendations

With respect to municipal functionality, the Commission recommends that:

1. The Minister of CoGTA, the Minister of Finance and the President of SALGA jointly lead the development of a government-wide accepted definition of ‘municipal functionality’. The definition should be based on the six factors put forward by the Commission: maintenance and performance of systems, processes and practices in governance, service delivery, financial management, leadership, political management, and human resources. Further, they should ensure that the accepted indices for measuring dysfunctionality should be explicit. Indicators of dysfunctionality should be chosen carefully and should exclude factors that are outside the current control of municipality. This definition can be used across government, including in targeting capacity support grants and further differentiating conditional grants.

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Chapter 8

Local Government Infrastructure Delivery Management and its Fiscal Implications

Eddie Rakabe

Introduction

Importance of and challenges relating to infrastructure delivery

Municipalities spend in excess of R40 billion per annum on local infrastructure and yet the infrastructure delivery programme is marred by ubiquitous incidents of delivery management inefficiencies (National Treasury 2017, Ndzelu, 2016, CIDB, 2007). The debate about infrastructure delivery tends to focus on the financing challenges – i.e., how to raise funding for new infrastructure projects – whereas the broader infrastructure delivery management dimensions are neglected. Evidence suggests that substantial cost and asset longevity benefits can be realised from better infrastructure life-cycle management (IMF, 2015). Infrastructure delivery management entails the planning, budgeting, coordination, project management and evaluation (throughout the project lifecycle), transparency, accountability and regulations in respect of making infrastructure services available to the public (OECD, 2015). It is about ensuring that the right infrastructure is implemented cost efficiently, in time, within the budget, with high quality and that it is operated efficiently and well maintained.

In South Africa, LG infrastructure delivery performance is lagging despite the widely accepted view that capital investments are crucial for economic growth and development. Municipalities are entrusted with the important responsibility of developing infrastructure necessary to facilitate delivery of basic services to households and utility services to the business sector. The infrastructure delivery programme is marred by a combination of external and internal constraints. Externally, municipalities are hamstrung by the growing pressure placed on existing infrastructure due to many years of neglect on upgrades and maintenance, population growth, escalating input costs, and the general shortage of resources. Internally the infrastructure delivery programme is constrained by weaknesses in technical capacity, especially with respect to planning, contracting, and quality assurance (DPME, 2014).

Notwithstanding these infrastructure delivery challenges, the trend in the expansion of enabling infrastructure to facilitate delivery of municipal basic services between 2001 and 2018 is one of broad improvement. Nationally, electricity connections and piped water to households demonstrate the largest improvements with over 90 per cent and 88 per cent access rates

respectively (Stats SA, 2018). Access to improved sanitation facilities (waterborne and pit with ventilation) and weekly refuse removal services have also improved markedly to around 82 per cent and 66 per cent respectively over the same period (Stats SA, 2018).

Infrastructure delivery improvements have been made possible by numerous interventions including concerted budgetary allocations and capacity support from an array of national and provincial government departments. Municipalities have received R1 trillion over the past 18 years intended specifically to finance delivery of basic services infrastructure (National Treasury, 2017). During the same period, various capacity building programmes were instituted to address technical deficiencies in respect of spending the allocated funding and to ensure effective management and implementation of the infrastructure projects. Many years later and following successive waves of interventions, municipalities continue to demonstrate an alarming inability to spend capital budgets, maintain and operate existing infrastructure, manage infrastructure projects, and build quality infrastructure. Projects are characterised by cost overruns, completion delays and poor workmanship (AGSA, 2018). The result is unending cycles of budget allocations for rectification and project completion, rapid deterioration of assets in the case of maintenance failure, and poor workmanship, “white elephants”, and ultimately irregular or prolonged service delivery interruptions.

Relentless infrastructure delivery challenges raise questions about the effectiveness of infrastructure delivery management and accountability arrangements for overseeing the municipal infrastructure investment function. Against this background and the context of declining infrastructure budgets¹⁸, this chapter assesses the LG infrastructure delivery chain and management systems with a view to identifying bottlenecks that hamper the development of an effective, efficient and sustainable infrastructure delivery programme. The study employs a three pronged methodological approach including a qualitative assessment of the LG infrastructure delivery architecture, a budget analysis of infrastructure programmes and fieldwork to gain insights about infrastructure delivery management processes within municipalities and other government spheres responsible for LG infrastructure.

Problem statement

As much as public infrastructure projects create positive impact on societies, influence economies, and affect lives, when they fail the negative impact is far-reaching. The cost of failure is more than purely financial. Infrastructure projects that are associated with cost overruns, completion delays, underperformance, underutilisation, accelerated deterioration due to poor maintenance, and results in expensive “white elephants” and “bridges-to-nowhere” can hurt the tax-payers, delay essential improvements, and even trigger civil unrest (OECD, 2015 and Oracle, 2016).

The 2018 AGSA report on LG audit outcomes bears testimony to infrastructure delivery management challenges besieging municipal infrastructure delivery. Among others, the report reveals that municipalities fail to spend the total allocated budget for infrastructure. Even where

¹⁸ Infrastructure grants experienced the largest baseline cuts to budgets over the 2017 MTEF.

the budget is fully utilised, the intended delivery targets are either not evaluated or simply not achieved. In other instances, municipalities fail to undertake the necessary infrastructure condition assessment in order to inform the maintenance plan, priority list and the budget for renewal or routine maintenance. The report further highlights numerous cases of infrastructure projects being delayed, abandoned, or municipalities reallocating new budgets to rectify poor project workmanship (AGSA, 2018).

Infrastructure delivery management failures can have devastating effects not only on access to basic services but also on the environment and the health and safety of communities. For example, planning deficiencies in the construction of a waterborne sanitation project in Matjhabeng municipality have been found to cause sewage overflow in the community because of poor project scoping (AGSA, 2018). In the City of Tshwane, delays in the completion of a water purification plant in Hammanskraal resulted in communities consuming unsafe drinking water and protracted violent community protests (AGSA, 2018).

To be fair, infrastructure delivery challenges are not only attributable to internal municipal capacity weaknesses. Infrastructure investment is a shared responsibility across levels of government through shared policy competencies or joint funding arrangements. Delivery arrangements for shared infrastructure projects make their management particularly complex. The complexities arise from numerous factors such as intergovernmental joint planning and delivery for infrastructure and the blurred lines of responsibility and accountability within the LG administration and across the spheres of government.

Municipal infrastructure delivery challenges continue amidst a plethora of ongoing system and capacity support interventions by the national government and the non-government sector. Systems that seek to establish a clear and common approach to managing infrastructure delivery such as the infrastructure delivery management system (IDMS) are not yielding the desired results (SAICE, 2016).

Similarly the package for infrastructure support programmes comprising numerous capacity building grants and institutions seldom result in sustained impetus for internal delivery capacity and as a result municipalities tend to relapse as and when support programmes are terminated.

Research questions

This chapter addresses the following questions:

- Is the overall intergovernmental framework for infrastructure delivery management conducive to effective delivery or is it overly burdensome?
- What are the institutional bottlenecks in the delivery and accountability processes for LG infrastructure?
- To what extent do the intergovernmental fiscal arrangements for LG infrastructure enable or impede good infrastructure delivery governance?
- How can intergovernmental fiscal levers be used to improve LG infrastructure delivery management?

Research objectives

The research objectives are:

- To evaluate the regulatory and institutional frameworks underpinning the delivery of LG infrastructure;
- To identify bottleneck hampering effective LG infrastructure delivery management;
- To examine the fiscal implications of poor infrastructure delivery management;
- To assess options through which intergovernmental fiscal instruments and other related levers can be used to enhance the infrastructure delivery management processes of LG infrastructure; and
- To make recommendations for the 2019/20 annual submission to the Division of Revenue.

Literature review

International best practice in infrastructure delivery management

There is a growing international recognition that the focus on the creation of new infrastructure investments, without recognising the long-term life cycle commitments associated with the maintenance, operational and renewal of the capital stock, is not sustainable (IMF, 2018). Local government infrastructure networks for roads, water, and electricity and community amenities represent vast public investments made over long periods to support sustainable modern livelihoods. Improving the management of infrastructure can bring major benefits by ensuring that scarce resources are used in the most effective manner, thereby enhancing economic growth, improving living standards and ensuring environmental sustainability (Association of Local Government Engineering, 2006).

At the most basic level, the goal of infrastructure delivery management is to meet the required basic level of services cost effectively and through managing the assets over their useful life. Public infrastructure delivery management (PIM) addresses the responsibilities for eliminating wasteful spending, selecting the right projects, allocating the right resources to ensure on-time and on-budget completion, and coping with changes (Oracle, 2014). Key elements of effective infrastructure delivery management are planning, strategy and prioritisation, definition of service levels, delivery model and monitoring of performance, adopting long-term cost effective management strategies, understanding and meeting the impact of growth through demand management, managing risks associated with infrastructure networks and continuous improvement of the infrastructure stock (Coalition of Australian Governments, 2011). The discipline and its related practices and processes enables those charged with public infrastructure projects to respond competently and efficiently to the widest possible stakeholder interests (Oracle, 2014).

Whereas there is no available blueprint for managing infrastructure delivery there is a set of management processes and dimensions that needs to be in place when implementing a public sector built programme. The framework offers decision makers an approach to analyse challenges, map out options on how to solve them, and guide them in carrying through

decisions. The delivery management framework consists of two components: A list of governance preconditions - these concern the overall enabling governance environment for infrastructure; and a decision tree, which guides institutions with respect to making sectoral decisions and overall infrastructure decisions. A strong capacity with regards to one precondition can to some extent compensate for a weaker capacity in another. However, literature and practice suggest that they are mutually reinforcing and must be pursued as a package (OECD, 2015). The following principles represent a best practice approach to infrastructure delivery management:

- A long-term national strategic vision for the creation and use of infrastructure, which takes into account the multi-dimensionality of the challenges. Investment decisions must be of a strategic nature, aligned with national, provincial or municipal strategic objectives.
- Regulatory frameworks, principles and processes that encourage the sustainable and affordable development, management and renewal of infrastructure.
- User-centric process for managing infrastructure projects over their life-cycle delivery, based on broad based consultations, structured engagement and access to information and with a primary focus on users' needs.
- Frank, regular and performance oriented coordination across levels of government and jurisdictions. Coordination between levels of government should balance government perspectives and sectoral views.
- The appropriate skills and procedures to ensure rigorous projects assurance, affordability, value for money and transparency.
- Project assessments based on data and a balanced value for money procedure.
- Systems in place to ensure a focus on the performance of the asset throughout its life.
- Corruption entry points at each stage of the public infrastructure project are mapped and integrity and anti-corruption mechanisms enhanced.
- TAn appropriate delivery modality that integrates political, sectoral, and strategic aspects.

The LG infrastructure is recognised for its inter-connectivity and dependency, not only within a single asset network, but also across the infrastructure delivery chain (Association of Local Government Engineering, 2006). Typically, the infrastructure asset base may include transportation networks (road, rail and ports), electricity reticulation systems, water utilities (water supply, wastewater and storm water), solid waste facilities, parks and recreation facilities as well as educational facilities. Proper management of these interdependencies is crucial as the failure of one component within a network and the delivery management processes can affect the ability of the system to function optimally. For instance, the inability to plan properly can affect both the project design and management leading to project and asset failure (OECD, 2015). Table 39 provides a breakdown of the benefits associated with good infrastructure delivery management.

Table 39: Benefits of infrastructure delivery management

Infrastructure	Benefits
Improved governance and accountability	<ul style="list-style-type: none"> • Provide the basis for evaluating and balancing service, price and quality trade-offs • Improves accountability for use of resources • Provides clear audit trail on the appropriateness of decisions taken • Improves ability to benchmark result against similar organisations
Enhanced service management and customer satisfaction	<ul style="list-style-type: none"> • Improves performance and control of service to the required standard
Improved risk management	<ul style="list-style-type: none"> • Makes it easier to assess probability of asset failure and service continuity • Addresses the inter-relationship between different asset networks
Improved financial performance	<ul style="list-style-type: none"> • Improves decision making based on costs and benefits of alternatives • Improves prioritisation of investment, interventions and • Provides justification for future infrastructure projects and funding requirements

Source: Adopted from Association of Local Government Engineering, 2006

It should be emphasised that often the good infrastructure delivery management process is one that seeks to achieve good balance across competing legitimate interests. For example:

- Moving projects forward need to be balanced against a thorough consultation process;
- Providing suitable incentives for private sector participation and risk transfer needs to be balanced against the price for such participation; and
- Regulatory stability needs to be balanced against the need to adjust frameworks in the light of developments.

In essence these trade-offs require a competent public sector and honest discussions among all stakeholders concerned (OECD, 2015).

Methodology

The study employs a three-pronged methodological approach including a qualitative assessment of the LG infrastructure delivery architecture, a budget analysis of infrastructure programmes, and case studies to gain deeper insights about infrastructure delivery management processes within municipalities and other government spheres responsible for overseeing LG infrastructure delivery. Interviews were conducted with the National Treasury, COGTA and the MIS. The study sample for the case studies comprises five local (Category B) and three districts (Category C) municipalities selected on the basis of being located in district municipalities with the highest level of dysfunctionality in terms of the 2018 National Treasury and COGTA’s list (COGTA, 2018). Interviews were conducted in a semi-structured manner allowing for the respondent to freely explain the topics while guarding against ambiguity. The researcher took detailed notes during interviews which were analysed and categorised according to the recurring themes.

Table 40: Case study sample of municipalities

Province	Local municipality	Total number of municipalities
Alfred Nzo	Matatiele	3
	Mbizana	
Umzinyathi	Endumeni	2
Vhembe	Makhado	3
	Collins Chabane	

Infrastructure delivery management practices in South Africa

Regulatory and institutional framework for infrastructure delivery

The Municipal Systems Act, 2000 (Act No. 32 of 2000) (MSA) establishes the Integrated Development Plan (IDP) as the overarching strategic framework for guiding and informing infrastructure delivery and overall development in the LG space. The IDP provides a five-year basis for coordinating all municipal short and medium-term goals into a single strategic plan, and importantly for determining the extent of financial and human resources required to implement such plans. Compiling the IDP is a team effort that requires input from various components of municipal administration, including infrastructure, community service, financial planning and corporate services. Legislatively, the IDP must outline a range of factors including service delivery backlogs, municipal development priorities, alignment of municipal development plans with the national and provincial sector plans, the land use development patterns and a financial plan (DPLG, 2006).

Sections 78 and 79 of the MSA lay out the framework that needs to be followed when municipalities implement their infrastructure plans. Most notably, municipalities are required to assess their internal and external capacity to deliver infrastructure projects with particular emphasis on the cost and benefits associated with each delivery arrangement, the future capacity of the municipality to deliver projects internally, different service delivery options and the views of the local community. Municipalities are further required to conduct a feasibility study on each selected infrastructure, taking into account value for money, the needs of the poor, affordability, and broader organisational and budget implications.

The infrastructure sector plans which are required in the compilation of an IDP are guided by the legislative mandates of the various sector departments responsible for overseeing the different municipal functions (e.g., water, electricity, roads). Each sector department is required to provide inputs into the respective IDPs of every municipality through the Comprehensive Municipal Infrastructure Plan (CMIP). The CMIP details the capital works programme (new works, refurbishment, upgrading) and the operations and management strategies, risks and priorities, budgets and funding sources as well as tariff implications for current and future years. The principal legislation in the infrastructure delivery chains is the Health and Safety Act, 1993 (Act No. 83 of 1993) pertaining to building regulations. Municipalities as owners of structures such as roads, waterworks, reservoirs, bridges and

buildings are required to maintain high safety standards and keep maintenance records for inspection purposes. This legislative delivery and infrastructure standard has lifetime cost implications for the municipal budgets.

Over and above legislative requirements for coordinated infrastructure delivery, there are certain technical norms and standards with which municipalities need to comply. For instance, the Water Services Act, 1997 (Act No 108 of 1997) regulates, among other things, potable water quality, metering, and water flow that equally requires investment in enabling infrastructure. Construction has to be carried out in accordance with South African National Standards (SANS) code of good practices. The human settlement sector requires municipalities to apply certain design and technologies in the implementation of infrastructure. Furthermore, the Municipal Infrastructure Grant (MIG) provides broad guidelines in the delivery of infrastructure for minimum basic level of services, e.g., one street light for every four households.

From the foregoing discussion, it is evident that LG infrastructure delivery management is subject to multiple layers of regulatory requirements that may be perceived as overly burdensome and costly.

Infrastructure delivery chain

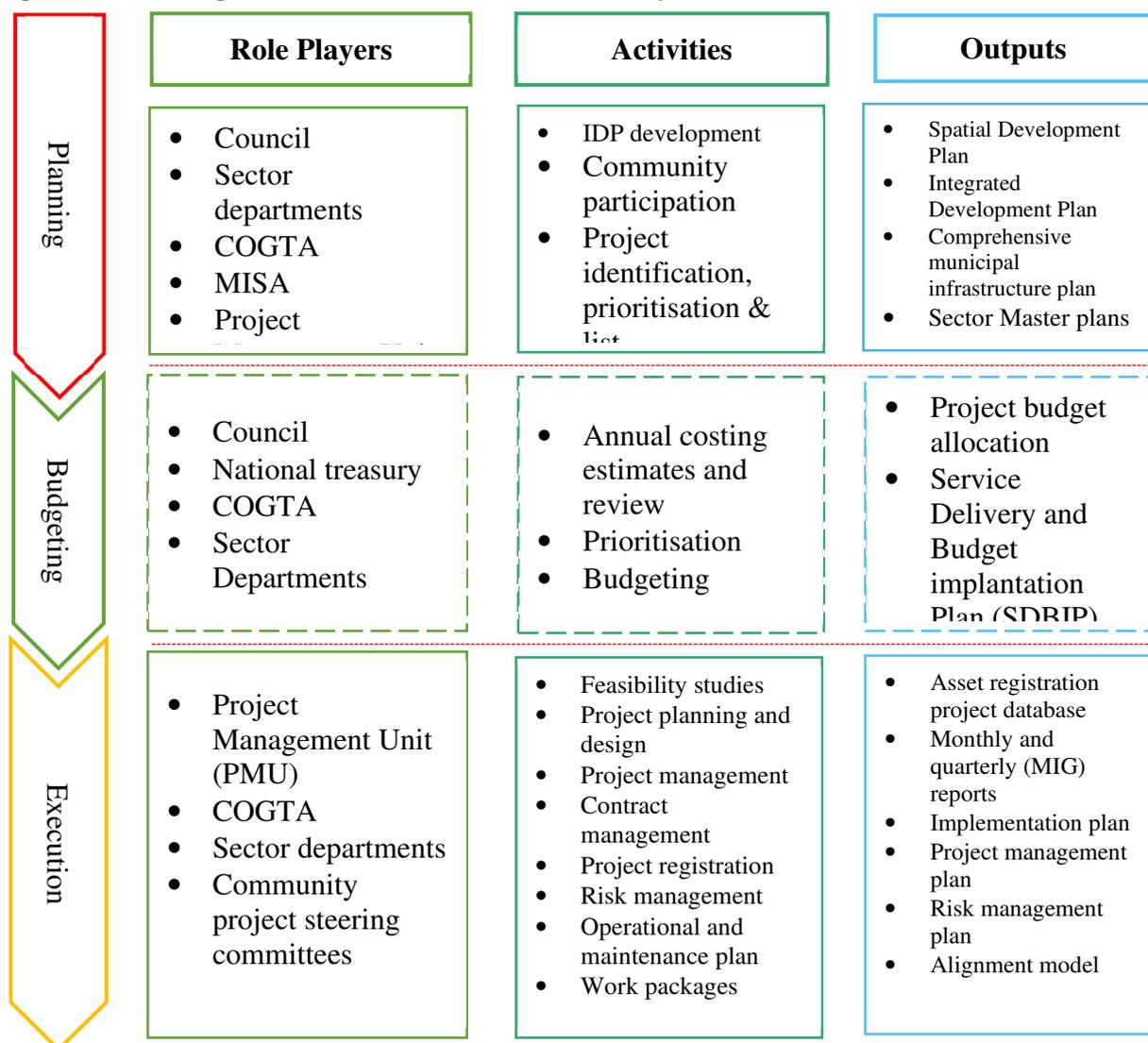
The Infrastructure Delivery Improvement Programme (IDIP), overseen by the National Treasury, aims to build capacity for integrated planning, budgeting and procurement and management of infrastructure. Following a six-year period of piloting, the IDIP was augmented by a guideline implementation tool called the Standards for Infrastructure Procurement and Delivery Management (SIPDM) which establishes control frameworks for the planning, design and execution of infrastructure projects and infrastructure procurement. These interventions culminated in the development of the Infrastructure Delivery Management System (IDMS), a best practice model for infrastructure delivery and management to be used by all spheres of government. Overall, these tools seek to establish a clear and common approach to managing public investment throughout its “life cycle” and across levels of government (SAICE, 2016)

LG infrastructure is delivered in accordance with the delivery chain or framework set out by the IDMS overseen by the National Treasury as well as the Project Portfolio Management (PPM) methodology developed by the MISA. IDMS is a guiding tool which outlines best practices in infrastructure delivery management, with a particular focus on life-cycle management, procurement management systems necessary to acquire, operate and maintain infrastructure, skills development, and compliance with legislation. Figure 38 provides a generic outline of the delivery chain starting from planning to execution and indicating the different role players along the process as well as activities involved and the work outputs.

As can be seen from Figure 38, infrastructure delivery management entails an elaborate process of planning, budgeting and project execution. During the planning phase municipal councils interact with the community, sector departments and other stakeholders to identify and

prioritise projects informed by the needs and availability of resources. The consultation processes culminate in a compilation of the CMIP that serves as an input into the IDP. Once the planning phase is complete, the process moves into a second phase where budgets are allocated in accordance with council priorities, and project cost estimates as well as the MTEF. The final execution phase entails a number of activities and often involves a huge financial burden on municipalities in the infrastructure delivery process. For instance, every municipality is expected to establish a fully resourced PMU, headed by a qualified engineer, responsible for among others things administration of MIG funds, project identification, feasibility studies, coordination, and management. Municipalities are further expected to establish a community project steering committee for every infrastructure project, to assist in monitoring contractors in conjunction with the project management unit. (DPLG, 2006; CIDB, 2010).

Figure 38: Local government infrastructure delivery chain



Source: Commission compilation: CIDB, 2010 and MISA, 2018

The IDMS toolkit describes the infrastructure delivery process as comprising three important stages, namely, project portfolio, project management and operations and maintenance. The

toolkit acknowledges that certain infrastructure projects may be related in terms of scope and focus and should therefore be grouped under one portfolio to enable sharing of resources and to maximise cost efficiency. Infrastructure projects that have been grouped together may be delivered under a single contract or what is commonly referred to as “work package”. Municipalities are further encouraged to adopt the “gateway system” as part of project management recommended by the Construction Industry Development Board (CIDB) in which a well informed decision is required at every stage of the infrastructure life cycle (from design, construction, refurbishment, alteration, rehabilitation and maintenance) before proceeding to the next stage (CIDB, 2012). In this way projects are likely to remain within agreed scope and budget limits, and aligned to the objectives for which they were conceived. However, it is worth mentioning that there are different project management systems and methodologies used by municipalities, e.g., management contracting¹⁹, design and construct²⁰, develop and contract²¹ and design by the employer²². Once the project is completed, municipalities must have an operations and management plan which details how the asset is incorporated into the existing portfolio of assets, managed and maintained over the life cycle and eventually how the asset is demobilised (CIDB, 2010).

The analysis thus far indicates that the regulatory, institutional and management framework for the delivery of LG infrastructure is well established. There are sufficient guidelines informing municipalities on what legislation to comply with and activities to undertake in the process of procuring infrastructure and managing it throughout the life cycle. However, what is required in theory may not always be practically feasible. Some municipalities may lack the resources to put in place the requisite structures or follow the necessary processes, thereby leading to poor infrastructure delivery performance. Furthermore, the multiple layers of regulations, standards, controls and activities may be overly burdensome and costly for some municipalities. For instance, the need for municipalities to conduct feasibility studies and appoint project steering committees for every infrastructure project takes a substantial amount of resources away from the budget for works. Some municipalities may simply lack the capacity to conduct these activities, notwithstanding that feasibility studies are a crucial component of infrastructure delivery management.

The state of LG infrastructure delivery management

Approximately 89 per cent, 80 per cent and 84 per cent of households in South Africa have access to water, sanitation and electricity services respectively but the reliability of such services is poor. Water supply interruptions are acutely high reaching 50 per cent in provinces such as Limpopo while quality levels are rated at just under 50 per cent (Statistics SA, 2018). Poor water quality and supply interruptions are partly indicative of failing municipal infrastructure. The Department of Water and Sanitation (2017) indicates that 56 per cent of 1150 waste water treatment works and 44 per cent of 964 of water treatment works are in poor

¹⁹ Where the services of a contractor need to be procured for the planning, design, execution and close-out of the project.

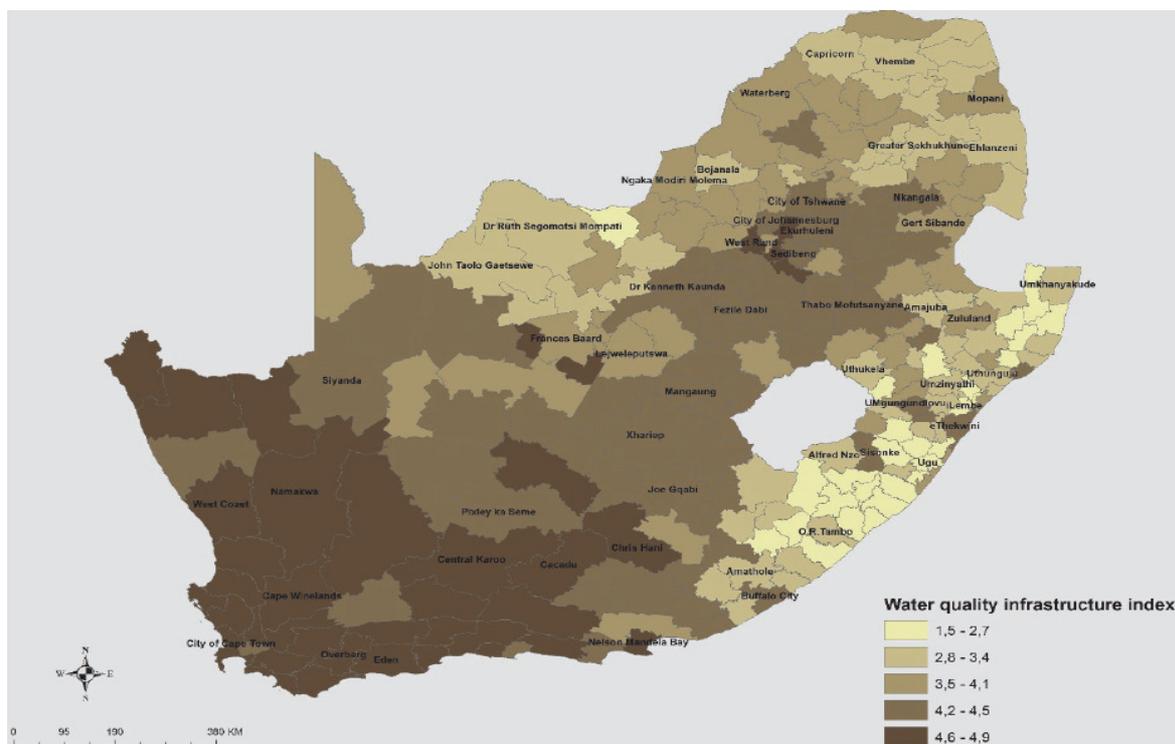
²⁰ Contractor is procured only for the design and execution of works

²¹ Contractor appointed for detailed design (based on concept from employer) and execution

²² A separate contractor is procured for the design and another for execution of the works

to critical state and therefore require urgent rehabilitation. A substantial amount of water is lost to leakages due to failing municipal water reticulation networks. These poor infrastructure conditions also exist in electricity reticulation, roads and storm water drainage (Stats SA, 2016; COGTA, 2010). Figure 39 illustrates the extent of water infrastructure quality by municipality. As can be seen, municipalities with the lowest infrastructure quality score are mainly located in the rural provinces. While substantial progress has been made with regards to providing access to services, National Treasury (2011) noted that additional funding is increasingly required to service ageing municipal infrastructure, while alternative infrastructure options should be explored in rural communities where the cost of expanding infrastructure is either prohibitive or unsustainable.

Figure 39: Water infrastructure quality index by municipality, 2016



Source: Stats SA: 2016

Table 41 illustrates the state of LG infrastructure delivery performance in 2017/18 – funded through the Municipal Infrastructure Grant, within the five sampled projects and for the sampled Category B and Category C municipalities respectively. The MIG seemingly offers municipalities’ relative flexibility to select infrastructure projects that are in line with the needs of their respective communities. Municipalities tend to prioritise roads and stormwater related infrastructure projects above other infrastructure types. It also evident that municipalities focus predominantly on rolling out new infrastructure while neglecting renewal of existing infrastructure. Project completion periods are also problematic for most municipalities. Many projects reported as being under construction or have long passed the target completion date are nevertheless still listed as MIG funded projects for 2018.

Table 41: Municipal infrastructure delivery performance

Municipality	Total Project Samples 2017/18	No. of Projects by Sector					Delivery Status			Project Status		
		Roads and Stormwater	Sports	Water and Sanitation	Community Facilities	PMU	New	Rehabilitation	Design and Tender	Construction	Completed	
Matatiele	30	23	4	-	-	2	29	0	5	15	7	
Mbizana	31	18	1	1	11	1	27	4	7	11	12	
Umzinyathi	15	-	-	15			14	1	1	13	1	
Enduneni	4	2	-	-	2		4	-	1	2	1	
Makhado	7	-	-	-	-		7	-	-	7	-	
Collins Chabane	5	5	-	-	-		5	-	1	4	-	

Source: Commission compilation from COGTA (MIG) database

The 2016/17 AGSA (MFMA) report highlights the current state of poor LG infrastructure delivery management in greater detail and the associated adverse implications for service delivery, budget sustainability and the broader community stability and health issues. The report notes a number of shortcomings in relation to the development and maintenance of infrastructure, in particular, that projects are not completed on time, workmanship is poor, contractors are not monitored, budgets are over-escalated, supply chain processes are not being adhered to and project management practices are not being applied (Auditor General, 2018). (See Table 42)

Table 42: Key audit findings on infrastructure delivery management

Infrastructure type	Audit findings	Audit findings	Audit findings
Roads infrastructure	55 per cent of the municipalities did not have a maintenance plan or priority list for renewal and routine maintenance.	27 per cent of the municipalities did not do condition assessments of all their roads.	26 per cent of the municipalities responsible for road projects exceeded their planned completion dates.
Water infrastructure	27 per cent of municipalities did not spend allocated project funds	21 per cent of municipalities did not comply with supply chain management policies	26 per cent of municipalities exceeded their project completion timelines
Water infrastructure maintenance	46 per cent of municipalities did not have maintenance plan and 22 per cent did not budget for maintenance	The targets for routine maintenance on infrastructure were missed by 24 per cent	41 per cent of municipalities had water loses of more than 30 per cent

Source: AGSA, 2018

These findings suggest that there are weaknesses in the infrastructure delivery chain. For instance, the absence of a maintenance plan or project priority list indicates the lack of adequate

planning, which is crucial for other phases of infrastructure delivery to carry-through uninterrupted. Dysfunctional councils which cannot assess the needs of the community generally experience serious financial losses from inefficient infrastructure delivery. The AGSA (2018) highlights an incident where one municipality provided two toilets per household in one community when the entire locality had a sanitation backlog of 15 000 households. Table 43 gives selected examples of the financial implications of poor infrastructure delivery management.

Table 43: Financial implications of poor infrastructure delivery management

Municipality	Project type	Financial implications
Mangaung	Airport development node	The municipality spent R141 million in planning and establishment costs since 2013/15 but no approval for township planning has to date been obtained.
City of Johannesburg	Housing	A R221 million housing project due to be completed in March 2016 was only 55 per cent complete by year end and abandoned by the contractor. The contractor was paid R22 million in excess of original contract value for additional work scope for which there is no evidence and approval.
Alfred Duma and Umngeni	Roads	Payment made to contractor for incomplete roads.
Govan Mbeki	Sewer reticulation network	A R25 million project was abandoned for two years with the municipality failing to terminate the contract and appoint another contractor to rectify the defects. This defects resulted in sewage flowing into streets and houses.
Ngaka Modiri Molema	Water treatment plant	A project which started in 2011/12 with a May 2014 completion timeline remained incomplete as at June 2017 with the budget having escalated from R68 million to R104 million.
Rustenburg	Rapid transport system	Phase 1 of the R3 billion project that commenced in 2012 with an expected completion date of 2016 was only 40 per cent complete in 2017 – with no records to indicate the total costs incurred.

Source: Adopted from AGSA, 2018.

Financial losses arising from poor infrastructure delivery management are only reflective of the underlying infrastructure delivery management weakness. There are a number of project level malpractices which cause and exacerbate financial losses. Table 44 lists the LG project management inadequacies by order of importance from a survey conducted by the CIDB (2014). Poor site and contractor management by municipalities ranks the highest of the key project management weakness followed by corruption. These results further corroborate the findings of the AGSA (2017).

Table 44: Local government project management deficiencies by order of importance

Interventions / situations	Overall mean	Rank
Poor site management	4.4	1
Lack of contractor quality expertise	4.4	2
Corruption	4.3	3
Inadequate resourcing by contractors	4.1	4
Lack of understanding of quality	4.1	5
Level of subcontracting	4.1	6
Inadequate information	4.1	7
Detail	4.1	8
Focus on cost by contractors	4.0	9
Poor constructability	4.0	10

Source: CIDB, 2014

Non-financial implications of poor infrastructure delivery management

The implications of poor infrastructure delivery management are not to be under-estimated or only reduced to financial losses. Deficient delivery management can have hazardous health and environmental effects. Many water quality studies in South Africa have revealed a declining state of wastewater and sewage treatment infrastructure, largely attributing this to a crucial number of infrastructure delivery management elements, e.g., poor planning leading to poor plant designs and insufficient plant capacity, unplanned connections to new settlements, malfunctioning pump stations arising from lack of maintenance and skill shortages and limited financial resources, and high maintenance costs. A combination of these challenges result in raw sewage or poorly treated water spilling into the rivers, streams, ponds and ground water which are the main source of water for communities and wildlife, frequently leading to outbreak of water-borne diseases.

The National Institute for Communicable Diseases (NICD) (2018) reported a single case of cholera outbreak in Kwa-Zulu Natal, Umkhanyakude DM in February 2018. Suspected cases of waterborne diseases were also reported in the City of Tshwane, in 2018 following poor workmanship on water treatment plant serving the Hammanskraal area. Other sporadic outbreaks have been reported in in Delmas, Mpumalanga where there were 380 cases of diarrhoea as well as 30 suspected cases and nine confirmed cases of typhoid fever. Outbreaks of typhoid fever in many parts of South Africa, including KwaZulu-Natal, Limpopo and the Eastern Cape, have also been reported (Mail and Guardian, 2004).

Many studies investigating these problems traced the pollution of water resources to design weaknesses, overloaded capacity, and faulty equipment and machinery of municipal wastewater and sewage treatment plants (Mema, undated).

Millions of people in Gauteng and North West provinces are at risk of contracting waterborne diseases with the latest discovery of effluent discharge into the Vaal River system. Such a likely disaster will not only devastate the health care system but also imply enormous financial

liabilities to municipalities and national government due to litigations. The Constitution guarantees every citizen the right to safe drinking water and failure to comply with this obligation can be challenged in the courts of law (South African Human Right Commission, 2018)

Municipalities in South Africa have made substantial progress with respect to delivering infrastructure to facilitate delivery of basic services. However the quality, reliability and efficiency of the services are questionable. Local government infrastructure delivery is marred by high levels of cost inefficiencies and financial losses. Projects are not completed in time, thereby requiring additional budget allocations; those that are complete are left idling for long periods due to lack of operational budgets while in some instances, projects are simply bungled.

Financing arrangements and implications for infrastructure delivery management.

The composition and structure of LG infrastructure plays an important role in determining the infrastructure delivery management arrangements in municipalities. LG infrastructure is mainly funded through conditional grants administered by national sector departments to implement sector specific priorities. The composition of the municipal infrastructure funding typically comprise ten grants which can further be categorised into rural/urban funding as well as direct²³ or indirect²⁴ funding. Table 45 gives a breakdown of these grants. As can be seen below, infrastructure funding for non-urban municipalities amounted to over R30 billion in 2018/19 with 75 per cent of the grants transferred through direct allocations. The MIG constitutes the largest proportion (67 per cent) of the total non-urban infrastructure transfers. Conversely, infrastructure funding to the urban municipalities, where infrastructure delivery management challenges are a rare occurrence, is comparatively smaller in recognition of own revenue raising capacity and mainly allocated through direct transfers.

²³ Grants transferred directly into the municipalities and overseen by the local councils.

²⁴ Grants allocated to municipalities but implemented by a third party (another sphere or organ of the state) on behalf of the municipality.

Table 45: Infrastructure grants to LG

R million	Allocations rural 2018/19				
	Custodian	Direct	%	Indirect	%
Municipal infrastructure	COGTA	15 288	67%		-
Regional bulk infrastructure	COGTA	1 865	8%	2 774	37%
Water service infrastructure	DWS	3 481	15%	852	11%
Integrated national electrification	Energy	2 087	9%	3 846	51%
Rural roads asset management	DoT	108	0%		-
Municipal disaster recovery	COGTA	21	0%		-
Total rural allocations		22 850		7 472	
Urban municipalities	Custodian	Direct	%	Indirect	%
Urban settlement development	DHS	11 382	62%		-
Public transport network	DoT	6 160	33%		-
Neighbourhood development partnership	NT	663	4%	29	100%
Integrated city development	NT	294	2%		-
Total urban allocations		18 499		29	

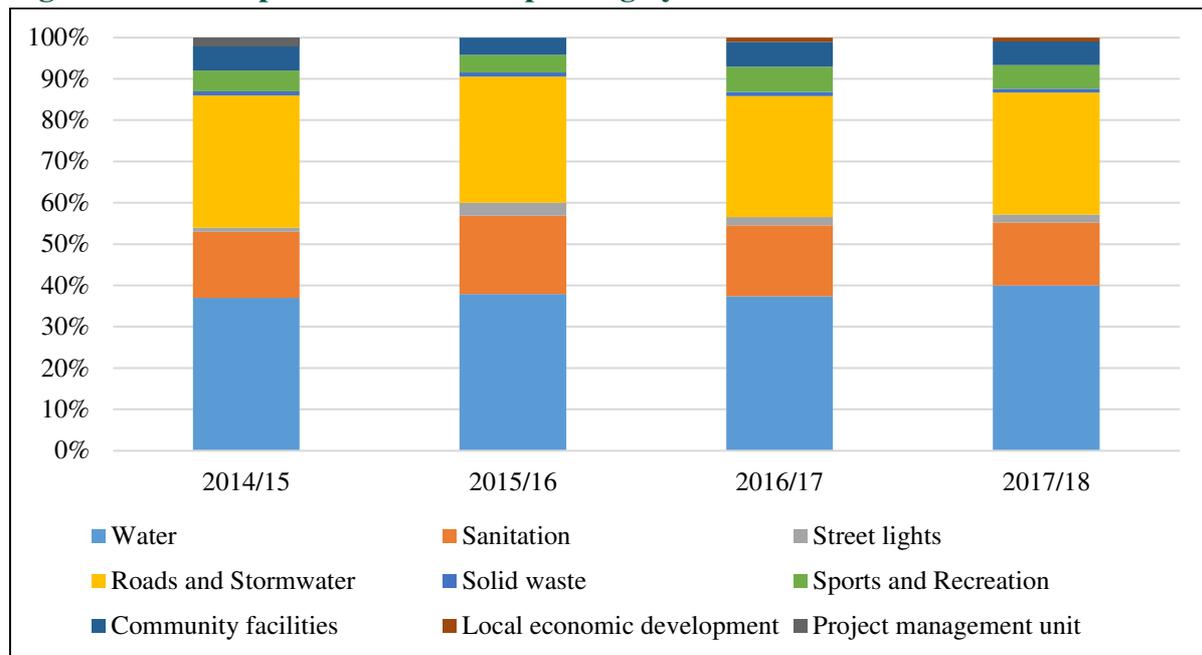
Source: Commission compilation from National Treasury, 2018.

Both the structure and the composition of local infrastructure funding impact on delivery management for a number of reasons. First, infrastructure grants are supposed to fund projects identified and approved through the IDP processes as indicated earlier. Yet national grant administrators or custodians often seek to dictate the investments priorities of municipalities thereby compromising the delivery management framework laid out by law and existing guidelines. The level of interference is particularly prevalent and problematic with indirect infrastructure conditional grants where infrastructure is rolled out without provision for life-cycle operational and maintenance costs. Further, stringent conditions attached to grant funding by administrators often leads to project implementation delays or shoddy workmanship as municipalities attempt to avoid under-spending (average spending on infrastructure conditional grants is generally below 90 per cent). National sector departments advocate for indirect transfers on the basis that municipalities lack adequate capacity to implement projects effectively and expediently.

The manner in which the grant framework is structured also creates challenges for coordinating project implementation at the local level, and accountability across levels of government. Ambiguity in roles and responsibilities further creates unnecessary duplication of grants and processes and congest the infrastructure delivery management machinery. This was especially evident in the water sector where the Bulk Water Infrastructure Grant and the Municipal Water Infrastructure Grant co-existed alongside the multi-sectoral MIG (responsible for financing water, roads, and sport facilities among other things). While the MIG is administered by COGTA, spending guidelines require that sector departments such as water, energy and sports should support and monitor municipal project implementation and even go as far as identifying projects. Ordinarily, such funding arrangements are poised to cause intergovernmental tensions and infrastructure delivery bottlenecks. First, municipalities as autonomous spheres are likely

to reject or abandon projects identified outside the local IDP prioritisation processes. Second, it is unreasonable to expect sector departments to support infrastructure activities of 253 municipalities and assume responsibilities for a function whose funding is administered by COGTA. MIG seems to violate the principle of “funds follow function”. Figure 40 shows that over 50 per cent of MIG spending is attributable to water and sanitation increasing to 80 per cent when roads are included (MISA interviews, 2018).

Figure 40: Municipal infrastructure spending by sector



Source: Commission compilation from COGTA database

Local government infrastructure delivery support interventions

Local government infrastructure delivery management challenges are not new and should not to be overly criticised. As a relatively new sphere of government (in comparison to the national and provincial government), the LG planning regime for infrastructure delivery has only been in place for less than 15 years (Presidency, 2014). Municipalities have had to adapt quickly to the rapid local administration reforms, including building the necessary capacity to absorb the fiscal transfers and to build and manage the infrastructure projects. The existence of large historic infrastructure backlogs and the emphasis on redress has incentivised municipalities to invest in new infrastructure relying heavily on external capacity – while compromising delivery efficiency, e.g., poor planning, poor project management and poor asset care, in many instances (National Treasury, *et al* 2014). Delivery challenges have been attributed mainly to accountability weaknesses, shortage of skills, and inadequate funding.

Recognising the persistent LG infrastructure delivery challenges, the national government has over the years invested a substantial amount of resources to support, streamline and improve municipal infrastructure delivery programmes. Numerous types of infrastructure delivery improvement programmes have been introduced and experimented with, including those that seek to improve governance (from planning to project management), provide funding for skills,

and involve direct deployment of technical expertise in municipalities. As seen from Table 46, there is clearly no shortage of initiatives to support LG infrastructure delivery management. This begs the question about why the infrastructure delivery programme continues to be characterised by wasteful expenditure, project completion delays, and cost overruns (symptoms of poor delivery management) despite the plethora of existing support programmes.

Table 46: Infrastructure support programme by category

Intervention type	Programme
Management	IDIP/IDMS
	MFMA Local government asset management guidelines
	Guidelines for Infrastructure asset management in local government
	Guideline for establishment of project management unit
	Regional management support contracts/ framework contracts for infrastructure
	Guide to infrastructure service delivery levels and unit cost
	Built environment performance plans
	Budget facility for infrastructure
	Presidential infrastructure coordinating committee
Funding	Conditional grants set aside
	Infrastructure skills development grant
Direct technical assistance	Siyenza manje (DBSA)
	Municipal Infrastructure Support Agency
	Government Technical Assistance Centre

Source: Commission compilation

LG infrastructure delivery challenges (national government perspective)

Poorly managed consultations

Involvement of stakeholders, such as communities and other users of infrastructure, is crucial for improving the quality of planning and the effective utilisation of the asset in the long run. Municipalities are, however, purportedly conducting superficial community consultations where the needs and priorities of the community are not always taken into account. For some municipalities, consultation processes are overwhelming as they have to deal with sparsely distributed communities with different interests. Aligning ubiquitous community interests with the limited municipal resources presents challenges such as the timely completion of infrastructure projects and the sustainability of completed projects given community protests and the associated destruction of properties. Contractors are sometimes denied access to the site when community members are not employed in the project (COGTA interviews 2018 and MISA interviews 2018).

Weak multi government coordination

Infrastructure delivery management processes become particularly complex whenever public investment involves a shared policy competency or funding arrangement across the different

levels of government. There is a long-standing challenge of unclear mandates between the national sector departments and municipalities in the infrastructure delivery chain. Sector departments, such as water, are ideally expected to participate in municipal IDP processes and in particular to assist municipalities in drafting water infrastructure delivery plans, project appraisal, designs and implementation. However, participation is limited or non-existent due to the complexity of IGFR relations in the delivery of infrastructure. First, there is no clear distinction of delivery and accountability roles between COGTA and other sector departments²⁵. Funding for local infrastructure is overseen by COGTA while the infrastructure delivery mandate sits elsewhere. Second, sector departments lack the necessary capacity to assist all municipalities with planning, project execution, and oversight. Most of the sector departments appear to have been building capacity to administer conditional grants instead of technical capacity to deliver, monitor projects, and intervene in cases of failure. Last and most important, the independent nature of municipalities or IGFR safeguards makes it difficult for sector departments to interfere with internal infrastructure delivery management operations. In recent years, sector departments have been showing a growing desire to appoint contractors through the indirect local government infrastructure conditional grants (COGTA interviews, 2018).

Small scale projects with high administrative fragmentation

The municipal infrastructure delivery programme comprises a substantial number (average of 2 500 a year) of small projects distributed across 257 municipalities. Fragmentation in infrastructure delivery often leads to lower returns on public investment and poor service delivery. Too many projects imply huge administrative and financial burdens for the oversight bodies but also require municipalities to carry-out endless project feasibility studies that seldom move beyond project conceptualisation stage.

There is a need for municipalities to acquire and retain sufficiently qualified and skilled personnel to be responsible and accountable for performing various tasks along the infrastructure life cycle. However, most municipalities are struggling to develop, attract and retain the requisite skills due to limited resources, internal organisational deficiencies and other systemic limitations. For instance, the wrong people are often appointed to important positions. Furthermore, municipalities are not allowed to implement succession planning or retain selected critical staff because of legislative requirements for competitive hiring processes. In the absence of internal skilled employees, municipalities rely on external contractors who often propose complex project designs unsuited to the needs and resources of municipalities (National Treasury interviews, 2018).

Political administrative interface

The stability of institutions responsible for infrastructure delivery management and the extent to which politicians interfere with the processes increase project risks and arbitrary decision

²⁵ Sector departments involved in the delivery of infrastructure may include the Department of Water and Sanitation, Department of Energy, Department of Environmental Affairs, Department of Public Service and Administration in respect of recommended human resource structures and determining consultancy rates and the Department of Performance Monitoring and Evaluation in analysing the organogram of municipalities.

making by project managers and developers. Local government infrastructure planning and prioritisation requires involvement of local councillors as part of community needs assessment and consultations. In the process of responding to the demands of the electorates, tensions between political promises and what is technically feasible frequently arise. Politicians often prefer new infrastructure instead of maintenance or refurbishment of existing capital stock. The imbalance between political and technical interests results in poor infrastructure decisions being taken, delays in finalisation of work packages, reduced capabilities to undertake contract management, and increased opportunities for corruption (COGTA interviews 2018 and MISA interviews 2018).

Monitoring and evaluation

An important challenge for LG is to catalyse sufficient capacity to oversee the performance of the infrastructure delivery programme as a whole. Evidence on infrastructure performance is crucial for decision making over whether to invest or not, managing infrastructure investment over its lifecycle, and determining value for money. In LG, monitoring is only carried out for the purposes of expenditure reporting. There is little monitoring of the quality of the developing infrastructure. More worryingly, municipalities have limited knowledge about the condition of existing infrastructure. Municipalities are expected to self-inspect and self-account on the quality of the infrastructure delivered. However, in the absence of functional project management or infrastructure units, “new roads are simply washed away, a few months following their completion” (MISA interviews, 2018).

Local government infrastructure delivery management challenges (municipal perspective)

Infrastructure delivery roles, responsibilities and coordination challenges

Interviews with the sampled municipalities suggest that the local administrators are well versed in the infrastructure delivery roles, responsibilities and the delivery value chain. The infrastructure role of local municipalities mainly entail building of access roads and bridges, miniscule electricity reticulation, community halls, sports and hawking facilities and the landfills, while district municipalities are mainly responsible for district wide water service infrastructure. The infrastructure delivery programme of all municipalities is informed by an elaborate IDP planning process involving a situational analysis, consultation with communities and ward based project prioritisation list. Requirements to have the IDP reviewed on an annual basis compromise continuity and project plan carry-through thus giving the impression that projects are left uncompleted. Municipalities further bemoan the impact of insufficient funding on the credibility of their plans and project priorities as communities are often divided to fit service needs within available budgets. There appears, however, to be an absence of a credible, costed and long-term infrastructure master plan across all municipalities interviewed. The reasons given for this oversight is unavailability of resources to fund the plans.

Linked to the broader issues of roles and responsibilities, municipalities identify intergovernmental cooperation or lack thereof as a key impediment to effective infrastructure delivery management. The inaction of provincial departments of roads in building connecting provincial roads have resulted in some municipalities taking responsibility for the construction of such roads and handing them over after completion. Roads are built in phases, sometimes at a slow pace of one kilometre per year, resulting in costly repeat tender processes and disorderly wear and tear. In the case of electricity, municipalities are at times expected to install income generating reticulation networks thorough the Integrated National Electrification Grant (INEP) which is then handed over to Eskom for operation. In some instances, reticulation networks in water and electricity are installed without sufficient bulk supply capacity just as bridges are built without connecting roads. This causes serious community strife and destruction of the infrastructure through protest. Similar intergovernmental coordination challenges have been experienced in construction of landfill sites and sport facilities where the national departments assume direct responsibility for project implementation while overlooking potential social risks associated with project failure and the role of municipalities in the infrastructure life cycle management. The implications of weak intergovernmental coordination are also evident and acute between DM and LM. In the main LMs lament the absence of communication when the district IDP approved projects are discontinued and the disregard for local bylaws (application for leeway) when districts implement water projects. The functional arrangements for water services authority and provision has adverse implications on the planning for and optimal operation of related sanitation infrastructure.

Budgeting

When it comes to budgeting as an important component of infrastructure delivery management, the sampled municipalities demonstrate sufficient capacity to comply with regulatory requirements. Projects are prioritised, allocated indicative budgets, registered on the MIG projects list as per grant requirements and lastly the service delivery and budget implementation plan (SDPIPs) are prepared. There is, however, a common costing challenge across all municipalities in which projects are simply under-budgeted or costed thus leading to project cancellation or completion delays. One municipalities gave an example of a community hall that was awarded to a value of R100 million over three years but is only able to cover R5 million in the first year. Municipalities attribute this anomaly to the use of dated costing guidelines, the lack of costing skills and the consistently declining MIG forward allocations.

Project management capabilities

The greatest challenges to infrastructure delivery management seemingly arise during the project execution phase, notwithstanding that all sampled municipalities have an existing PMU in place. Most notably, the PMUs are either not fully staffed nor manned by people with relevant technical skills. Rural municipalities in particular highlight the common issue of being unable to attract skilled engineers. Where engineers are secured, fixed term human resource contracting arrangements tend to trigger cyclical staff turnover patterns, as employees search for job security, which then undermines the continuity of projects. Municipalities rely on external service providers for project design, implementation and quality assurance. The

absence of internal capacity to review the suitability of designs and credibility of quality assurance reports present a risk for fraud (over-design, over-scoping) and projects completion failures, due to potential collusive arrangement between consulting engineers²⁶ and the contractors. A project for building a reservoir was abandoned in one of the sampled municipalities because of litigation challenges between the consulting engineers and the contractor.

Further, municipalities and the PMUs in particular are inundated with unscrupulous contractors who do not have capacity to handle some projects. Projects are sometimes stopped and contracts terminated (where the PMU is effective) mainly for reasons involving contractors' inability to complete work timeously rather than their ability to deliver quality work. Penalties are rarely applied for late completion and poor workmanship, partly as a result of the suboptimal functionality of PMUs. Seemingly municipalities are of the view that terminating contracts of underperforming contractors is a sufficient sanction since the remaining budget can still be used to complete the project. Only in selected cases are contractors blacklisted through the National Treasury database.

Other miscellaneous challenges besetting smooth infrastructure delivery management range from those that entail growing refusal by municipal officials to participate in bid evaluation committees and the lengthy times it takes to consider complex tender applications within the prescribed 90-day tender validity period. Terrain and weather conditions also came out strongly as an important factor affecting project completion delays and cost-overruns. For example, municipal roads that are being constructed are mainly gravel and therefore susceptible to deterioration in rainy conditions. Similarly, municipalities are increasingly experimenting with alternative and less costly construction materials that wear out rapidly in an attempt to mitigate against insufficient budgets and burgeoning infrastructure demands. While the PMUs are able to make technical decisions free from political interference, social considerations tend to prevail over such decisions. In one instance, the municipality was forced to move the construction of a community hall, after having committed funding, from one area to another against the advice of the engineers. Underfunding has been a recurring theme across the sampled municipalities, especially being singled out as major impediment to quality, timely completion of projects and proper asset lifecycle management.

Unused infrastructure

While there is substantial anecdotal evidence in the public discourse and the general media (see Matlala, 2018 and Nketo, 2017) on the prevalent phenomenon of unused municipal facilities or the so called “white elephants”, few cases were uncovered during the case studies. Municipalities indicated that all their completed infrastructure projects are captured in the asset register and fully utilised to best of their knowledge. However, further interactions with people with local knowledge revealed that such cases of unused infrastructure facilities exists. Table

²⁶ Consulting engineers are generally responsible for project design and would also participate in procurement process to ensure that submitted bids are in line with the technical specification and be required to approve project milestones. This engineers would also have relationships with contractors and when such relationship sours, projects falter.

47 illustrates an unused taxi rank and a municipal office building that has been under construction for several years due to poor contractor performance.

Table 47: Illustrative examples of inefficient infrastructure delivery management

Unused taxi rank	Delayed completion of municipal offices
	

Source: Own photography: fields visits

Monitoring and support

External support and monitoring and evaluation to carry out the built infrastructure programme are critical components of the municipal infrastructure delivery management. As indicated earlier, municipalities lack the necessary capacity to design, implement and oversee infrastructure projects and when left to their own devices, the results are financially and socially damaging. The national and provincial governments are charged with support and monitoring responsibilities and have instituted numerous interventions and programmes in this regard. These interventions in municipalities have had mixed results. Some municipalities have received and continue to receive the short-term technical support from MISA while others claim to have received nothing even after sending numerous requests. COGTA mainly plays an expenditure monitoring role and is seemingly rigid in enforcing spending targets while ignoring the underlying infrastructure delivery challenges. Overall municipalities are of the view that the much spoken about infrastructure delivery interventions are not visible.

Recommendations and conclusion

This chapter examined the LG infrastructure delivery management systems with a view to identifying bottlenecks that hamper the development of an effective, efficient and sustainable infrastructure life cycle management. Municipal infrastructure delivery programmes are characterised by management inefficiencies that include project completion delays, budget overruns, rapid asset deterioration, failure and under utilisation among other things. Literature ascribes these challenges to the absence of basic fundamentals of infrastructure delivery

management, including lapses in planning and prioritisation processes, deficient project management capabilities, stringent regulations and weaker intergovernmental coordination.

South Africa has a well-established legislative and institutional framework to facilitate sound infrastructure delivery management. Legislatively, the Municipal Systems Act lays out a clear framework for planning and prioritising service delivery and in particular steps to be followed when implementing infrastructure projects. The law is complemented by detailed project management guidelines outlining control frameworks and the delivery value chain from planning, design and execution of infrastructure projects as well as resourcing of infrastructure delivery units. Accordingly, municipalities are expected to rollout an elaborate infrastructure delivery management process that involves the council, community, sector departments and various municipal divisions. Seemingly, the framework is overly burdensome for under-resourced municipalities.

Notwithstanding the thorough delivery management framework, municipalities continue to portray serious shortcomings in relation to the development and maintenance of infrastructure, in particular, that projects are not completed on time, workmanship is poor, contractors are not monitored, budgets are over escalated, supply chain processes are not being adhered to, and project management practices are not being applied. The AGSA highlights numerous incidents where resources are wasted because of infrastructure delivery management deficiencies. Efforts to remedy the situation through a plethora of capacity building interventions are not yielding the desired results.

There are divergent views between national government as the overseer of infrastructure delivery funding on the one hand, and municipalities on the other as to why the problem persist. National government appears poorly informed about the issues that prevail on the ground and is divided along sectoral lines regarding its respective oversight roles. Municipalities appear overwhelmed by the scale of infrastructure needs, ambiguities in roles and responsibilities as well as administrative and regulatory processes associated with the delivery of infrastructure.

There is a need for greater emphasis on the full life cycle management of municipal infrastructure and not just on the rollout of new infrastructure. Planning for appropriate infrastructure that responds to local circumstances, maintaining infrastructure that has been built and refurbishing infrastructure that has reached the end of its design life are key to the sustainable infrastructure delivery management. In particular, planning relating to the technical aspects of infrastructure must link to financial planning in order to ensure adequate funding for both the capital and operational activity. While the LG infrastructure grants system is not an appropriate instrument to address this challenge, the design and management of each grant must promote good practices in infrastructure delivery management (with rewards for municipalities that follow best practices, and penalties for those that do not). Tampering with the grant frameworks and increasing technical support interventions alone is unlikely to have a meaningful impact without addressing the underlying structural intergovernmental delivery arrangements.

Recommendations

With regard to local infrastructure delivery management and its fiscal implications, the Commission recommends that:

6. The Minister of COGTA and the Minister of Finance jointly should, as part of the ongoing local government infrastructure grant reforms, strengthen the linkage between technical project planning processes and budgeting and foster smooth intergovernmental infrastructure coordination, including the following:
 - 6.1. Time-bound plans for consolidating all municipal infrastructure grants into the respective existing sector-specific grants and thereby provide the key sector department with the authority to carry out their infrastructure support mandate;
 - 6.2. Clarification of roles and responsibilities especially in the delivery of water and electricity services between local municipalities and district municipalities on the one hand, and public entities, including the water authorities and Eskom respectively. With respect to specific local geographic areas, these roles and responsibilities must receive further expression in an MoU. This will enable more direct targeting of funding for services in the Division of Revenue Act.
7. The Minister of COGTA should establish an infrastructure inspectorate through the MISA to assess management performance processes and capacity within municipalities to implement grant-funded and non-grant-funded infrastructure projects on a continuous basis.
8. The MISA inspectorate should undertake infrastructure delivery management capability assessments, quality inspections of new and existing built infrastructure, project management and delivery audits and advise on alternative approaches, materials or technologies for infrastructure delivery through the development of infrastructure blueprints for various types of municipal facilities.
9. The Minister of COGTA should align inspectorate assessments to the Division of Revenue Bill conditions for allocation, reporting and the disbursement of grants. This must be in line with the recently established Budget Facility for Infrastructure Programme criteria for appraising and budgeting for infrastructure projects.
10. The Minister of Finance, jointly with the Minister of COGTA, MECs for Finance and other provincial government departments, should within a DM area pull together the various project management resources present from GTAC, MISA, MIG administration and the respective municipal PMUs, to create a shared project management facility to improve the oversight capacity in respect of projects and to protect the financial interest of local government against contractor misconduct.

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Chapter 9

Evaluation of Infrastructure Investment Efficiency: Empirical Evidence from South Africa's Municipalities

Kholiswa Malindini and Odile Mackett

Introduction and background

Public investment is considered a catalyst for sustainable and inclusive economic growth and development through which poverty and inequality are eliminated. It supports the provision of basic public services and brings together citizens and firms to exploit economic opportunities (IMF, 2015). Public investment, as defined in OECD (2018, p. 4), refers to capital expenditure on physical infrastructure (e.g. roads, government buildings, etc.) and soft infrastructure (e.g. human capital development, innovation support, research and development, etc.) with a productive use that extends beyond a year.

As stated in Saxena, Chotia, and Rao (2018), infrastructure represents the basic physical and organisational structures and facilities that are prerequisites for the prosperous operation of a business or nation and sustainable economic growth. Thus, the level of economic development of a country is determined by the adequacy of infrastructure, that is, its quality and quantity. Economic infrastructure services such as water, electricity, transportation and telecommunications are typically critical for households and businesses and thus account for the largest share of living and business costs. The literature suggests that public investment infrastructure is an engine for economic growth, and its deterioration leads to less productivity (Esfahani, 1999).

Through the decentralisation policy, specific functions in relation to the provision of public goods and services are assigned to sub national levels of government and the tax revenue collected is divided in accordance with functions for specific investments to be undertaken. To this end, in South Africa the national and provincial governments invest in transport, health, education, recreational activities, housing low income families, while local municipalities invest in infrastructure which relates to the provision of water, sanitation, electricity, and solid waste directly to society (National Treasury, 2008). Public investment by local municipalities is meant to address socio-economic challenges faced by the different sections of society and to enhance economic activity. Essentially, investments by sub national spheres of government such as municipalities are often channelled to areas of critical importance to redress and are meant to bring about sustainable growth and development and to enrich citizens' welfare.

While the proponents of decentralisation posit that it promotes responsive and efficient government by tailoring consumption to smaller segments of the population, opponents argue that LGs are too susceptible to capture by the elite and lack the technical, human and financial resources to produce various heterogeneous public goods to meet local demand (Blöchliger & Égert, 2013).

The decentralisation of public decision making from central to LG has brought the analysis of the efficiency of local municipalities to the forefront in many countries. Municipalities have more functions in terms of providing essential services to society and given their closeness to society, they seek to maximise the social welfare of their own citizens and can adjust better to the provision of services required (Athanassopoulos and Triantis, 1998). However, local municipalities are generally faced with budget constraints as funding from central government is normally insufficient to finance all their functions and this necessitates the evaluation of their efficiency in undertaking public investments. While the concept of efficiency is defined by Sherman and Zhu (2006, p. 51) as the ratio of output to input, public investment efficiency is more specifically defined by Fund (2015) as the relationship between the value of the public capital stock and the measured coverage and quality of infrastructure assets.

While Pritchett (2000) and Gupta, Liu, and Mulas-Granados (2016) refer to efficiency as the ratio between the increase in public capital and the spending on infrastructure by the public sector, Kyriacou and Muinelo-Gallo (2018) define efficiency with respect to a production possibility frontier which specifies feasible output levels given the amount of inputs employed. Efficiency allows municipalities to attain a given economic objective at lower levels of investment, or makes possible the attainment of a larger economic impact at a given investment level (Kyriacou and Muinelo-Gallo, 2018). According to Miller and Mustapha (2016), “the average country loses about 30 percent of the returns on its investment due to inefficiencies in its public investment management processes”.

According to the literature, public investment particularly in infrastructure is crucial for a country’s growth and development; however, the benefits of public investment are determined by the efficiency levels of the public sector in utilising available resources (Miller and Mustapha 2016). The OECD (2018) concurs that public investment is a potentially growth-enhancing form of public expenditure. It is worth noting that capital expenditure on infrastructure does not guarantee economic growth *per se*, but efficiency in using the resources enhances growth, particularly in developing countries where socio-economic issues such as unemployment, poverty and inequality are at the highest. Efficient economic infrastructure investments thus bring about both sustainable and inclusive economic growth.

In contrast, poor investment choices waste resources, erode public trust, and may hamper growth opportunities. There is also broad consensus that the massive infrastructure deficit in many developing countries is a key bottleneck to their growth prospects (Jim Brumby, Era Dabla-Norris, Annette Kyobe, Zac Mills, 2011; Andrew Berg, Andrea Presbitero, 2016; Ngandu, Garcia, and Arndt, 2010).

Given the identified link between efficient public investments and sustainable and inclusive growth, developing countries have since focused on attaining higher economic growth levels and improving citizens' standard of living through improved levels of efficiency. Thus, measuring performance of municipalities in infrastructure activities is a key factor in ensuring sufficient provision of basic services and to eventually support higher standards of living (Esfahani, 1999).

The South African government believes that a labour-absorbing growth path to reduce unemployment can be realised by improving public infrastructure investments. While South Africa's current macroeconomic framework prioritises new infrastructure building programmes as a mechanism for addressing bottlenecks, it is important to note that such new infrastructure critically depends on the level of effectiveness of existing infrastructure networks. In a fiscally constrained environment where municipalities now have to address rapidly growing demand for public services, using a quantum of resources that is expanding slowly, there is a need to pay close attention to the efficiency of public investment particularly in infrastructure. The slowdown in municipal revenue follows reductions in government budget expenditure ceilings through declines in the operating budgets of national departments as well as lower transfers to public entities and sub national governments.

However, in 2012, the South African government adopted a National Infrastructure Plan (NIP) through the Presidential Infrastructure Coordinating Commission (PICC), mainly to develop the capacity and skills required to meet the demands of South Africa's growing investment programme needs and to remedy the skewed distributive effects of the execution of infrastructure during the apartheid years. The NIP sought to ensure that investments are properly managed and well-coordinated (Commission, 2013). Subsequent to this, enormous amounts were spent on infrastructure investment and although we expect greater efficiency to be achieved through greater freedom to allocate resources as a result of increased budget, it should be cautioned that this may not always be the case, as allocative inefficiency may occur due to a wide range of factors.

As pointed out by the Presidency (2012, p. 8) "state capacity is a pivotal determinant of successful infrastructure development". Additionally, for a market-based economy like South Africa, the ability to deliver and efficiently sustain infrastructure depends on the ability to collect tax, which ultimately determines the total inputs available for infrastructure investment, and the allocation of resources in relation to the needs of society.

To this end, the introduction of the NIP aroused optimism among people as it sought to ensure efficient utilisation of infrastructure investments through capacitating LGs.

The provision of infrastructure is crucial for sustainable and inclusive economic growth in South Africa; however, without efficient utilisation of available resources, it is impossible to maximise the social welfare of citizens. This chapter proceeds from the premise that in the absence of public infrastructure investment efficiency at LG level, economic growth

deteriorates. This is because municipalities are the first tier of frontline service provision to citizens and provide for the most essential human needs.

This chapter uses various data on South African LMs and adopts a Malmquist Productivity Index (MPI) model to provide an analysis of how efficient spending on infrastructure is within the South African LG sphere.

An overview of South Africa's public infrastructure investment

For South Africa, infrastructure lies at the heart of government's current stimulatory fiscal package and is a crucial component of the New Growth Path (Department of Economic Development, 2010). Consequently, policies on the planning and funding of infrastructure investments are at the forefront of the country's current development agenda.

This was evident in the adoption of the National Infrastructure Plan (NIP) in 2012 by the PICC. The NIP aimed at transforming South Africa's economic landscape while concurrently creating a substantial number of new jobs, and strengthening the delivery of basic services. Additionally, the National Development Plan (NDP) "Vision for 2030" (NPC, 2011) considers infrastructure as a tool to achieve socially and growth-oriented development²⁷. The NDP suggests that large infrastructure investments are necessary to drive economic activity in the country; however, these have to be undertaken in a structured and regimented manner to ensure that prioritised investments are efficiently implemented.

In addition, infrastructure expansion and maintenance have the potential to create jobs on a large scale, attract investment and lay a foundation for sustainable economic expansion. The National Treasury (2017) posits that a one percentage point increase in infrastructure investment will increase long-term GDP by 1.3 per cent and employment by 0.7 per cent.

Furthermore, according to the NDP, the target is for public sector investment to reach 10 per cent of GDP with gross fixed capital formation reaching 30 per cent of GDP by 2030 (National Treasury 2017; and Mbanda and Chitiga-Mabugu, 2018). Subsequently, in the 2013/14 budget speech, the then Finance Minister, Pravin Gordhan announced an infrastructure expenditure plan of R827 billion to construct new and upgrade existing infrastructure²⁸. These investments were aimed at improving access to economic infrastructure. Subsequently, the public sector infrastructure update, Plan *et al* (2016:3) reveals that the total public infrastructure expenditure in 1998/99 was R48 billion. Interestingly, this amount had increased to R249.9 billion in 2016/17. Of the total amount spent on infrastructure over these years, SOEs had the largest share of R1.2 trillion, followed by municipalities with a total expenditure of R643 billion.

This huge expenditure clearly suggests that the NIP enhanced public infrastructure investment; however, this chapter raises the question as to how effective this municipal infrastructure expenditure was, and did it yield the anticipated returns.

²⁷ <https://www.banking.org.za/what-we-do/inclusive-economy/infrastructure-development>

²⁸ <https://www.gov.za/issues/national-infrastructure-plan>

These questions underscore the significance of assessing infrastructure investment efficiency in addressing South Africa's socio-economic challenges.

Literature review

Importance of public infrastructure investment

The debate regarding investigating the impact of public infrastructure investment on sustainable growth and development was instigated by the seminal work of Aschauer (1989) who found a positive correlation between the reductions in the levels of investments in public infrastructure and declining productivity experienced in the United States during the 1970s. Since then, numerous studies (Dabla-Norris, 2008; Perkins, 2011, Mbanda & Chitiga-Mabugu, 2018; Jim Brumby, Era Dabla-Norris, Annette Kyobe, Zac Mills, 2011) in the development and growth literature have emphasised the importance and often decisive role of public infrastructure investments in improving the quality of life of citizens, as well as facilitating long-term and inclusive economic growth through the adoption of efficient investment strategies.

The importance of infrastructure can be attributed to its role in stimulating and facilitating economic activity. Ngandu *et al* (2010) suggest that the impact of infrastructure on economic activity occurs through three main channels, namely:

- The *supply channel*, where the quantity and quality of infrastructure such as electricity or reliable transportation networks that support logistics of goods and services, are key factors that directly influence investors' decisions in terms of where to locate or launch a business venture;
- The *improvements channel*, the rolling out of technology linked infrastructure, such as information and communication networks that promote greater numbers of mobile and fixed-line telephone subscribers as well as internet users; and
- The *provision channel*, which consists of new infrastructure in the form of paved roads and railway connections which creates new opportunities for expanding the product market for firms and the job market for labour, thus ensuring better accessibility to markets by economic agents and facilitating improved mobility of factors of production (Yoshino and Abidhadjaev, 2016).

Consequently, a number of policy recommendations have stressed the need for increased public sector investments to deal with infrastructure challenges faced by nations around the world. In advanced economies, increased infrastructure spending is viewed as essential to maintaining extensive transport, power, water and telecommunications networks, as well as upgrading and modernising such infrastructure for purposes of sustaining long-term productivity growth. As stated in OECD (2018, p. 5), "public investment shapes choices about where people live and work, influences the nature and location of private investment, and affects quality of life".

Similarly, international efforts to reduce poverty and improve economic growth in the developing world have encouraged countries to invest a large proportion of their national income in critical infrastructure – water and sanitation, electricity and adequate road networks, to meet human development needs and support economic and social development (McKinsey Global Institute, 2013).

In the post-1994 dispensation, the LG sphere is viewed as crucial to addressing the *apartheid* legacy of unequal access to both socio-economic infrastructure and economic opportunities. This is evident in the Constitution, which mandates municipalities to play a “developmental role” by fulfilling the “basic needs” of their communities, (National Treasury, 2008). The importance of infrastructure can be attributed to its important role in stimulating and facilitating economic activity.

With the importance accorded to infrastructure investments, municipal spending on its mandated functions has become an important component of public capital expenditure. Therefore benefits of infrastructure investment can be seen through lower transaction costs, economic linkages, and concentration of economic activity; responding to change (Ngandu *et al*, 2010).

According to Kyriaco and Muinelo-Gallo (2018), the efficiency of public sector infrastructure investments in enhancing economic growth and alleviating poverty is determined by a number of factors, namely, the manner in which infrastructure assets are managed, the capacity of public institutions to plan and guide the process of spatial development and integration as well as the ability of the public sector to co-ordinate its investments to deliver positive developmental outcomes and guide future fixed investments across the public and private sectors. Thus, good practices in budgeting, procurement and regulatory quality are integral to successful investment, although not always robust or consistent across levels of government. Guasch, Laffont, and Straub (2000) and Miller and Mustapha (2016) highlight political interference as one of the factors that impedes efficiency of these public infrastructure investments.

Dabla-Norris, Brumby, Kyobe, Mills, and Papageorgiou, (2012), and Henisz and Zelner (2006) add that public investment, particularly infrastructure can be influenced by political economy motives rather than mere economic efficiency considerations. Furthermore, Guasch, Laffont and Straub (2007) show that weak operational frameworks increase the likelihood of political interference and make the expropriation of sunk investments more likely, jeopardising the realisation of medium-term returns. Thus, the impact of public investment depends to a significant extent on how governments manage it.

Empirical evidence

The IMF (2015) examined the relationship between public investment efficiency and long-term growth, and found that the most efficient public investors get twice the economic return from their investment than the least efficient.

In light of the above, the majority of studies confirm a positive link between public infrastructure investment and economic growth; however, a limited number of studies that have examined infrastructure investment efficiency, particularly in South Africa. This is despite the introduction of the NIP and the subsequent increases in public infrastructure investment in the last six years.

Methodology

The methodological framework for measuring the efficiency of production units, in this case, infrastructure production, is based on a production function approach where inputs are combined to produce outputs, subject to given level of technology. The production function then characterises the technical efficiency frontier, and provides the benchmark for measuring the relative efficiency of the observed infrastructure production. Efficiency frontiers can be estimated based on parametric or nonparametric methods. The first approach involves the estimation of an econometric model with the restriction that input-output combinations must lie below the efficiency frontier. The second is based on linear programming methods and does not require that assumptions, such as the condition of normality, be made about the variables under study.

One such useful nonparametric method is the Data Envelopment Analysis (DEA) which has been widely used to measure public sector efficiency. For instance, Kirigia and Emorouznejad (2004) measured the technical efficiency of public health centres in Kenya using the DEA model, Athanassopoulos and Triantis (1998) used the DEA to examine LG performance in Greece, while Taylor and Harris (2004) examined the relative efficiency of South African universities between 1994 and 1997 using the DEA. Zere *et al* (2006) assessed the technical efficiency of district hospitals in Namibia using the DEA.

Given that infrastructure investment spending is unlikely to have an immediate effect in the period in which the funds have been made available, this study uses outcomes and spending from more than one time period. As such, it thus became necessary to use the panel data²⁹ extension of the DEA, the Malmquist Productivity Index (MPI). Although not as widely used as the DEA, the MPI “measures the productivity changes along with time variations and can be decomposed into changes in efficiency and technology” (Lee & Lee, 2010, p. 1). This model is based on the same principle as the DEA as it calculates a ratio of the inputs to outputs. The MPI function takes on the following form³⁰:

$$MPI^{t+1} = \frac{E^{t+1}(x^{t+1}, y^{t+1})}{E^t(x^t, y^t)}$$

²⁹ Panel data, also known as longitudinal data, is a combination of time series and cross-sectional data. This consists of a large number of observations which have variables recorded over a period of time.

³⁰ This function shows the formula for one of the time periods (t and $t+1$). The MPI calculates six values for each municipality, one for each of the time periods represented in the data separately. The geometric mean of the six values are presented in the appendix for each municipality.

Where *MPI* refers to the index, and x and y represent inputs and outputs at the different time periods. This index is calculated for each municipality at each individual time period. In this case, the Makana Local Municipality, for instance would have six MPIs, as it would have a value for 2012/13, 2013/14, up until 2016/17. We then calculated the geometric mean of the six values to obtain a single index for each municipality and by doing so evaluating how efficiency has changed over time. For a manageable discussion of the indices, we then calculated the mean values for each province by service, due to the large number of municipalities, and centred the discussion at the provincial level, although the geometric means for each municipality are also presented in this paper.

The MPI decomposes the results into changes caused by technical efficiency, which relates to returns to investment using a given technology, and technological efficiency. Technical efficiency is then further broken down into pure technical efficiency and scale efficiency.

Scale efficiency, also referred to as allocative efficiency, refers to making *use of resources* in such a way that it maximises profits and utility or an efficiency which emanates from an efficient use of inputs and outputs. Scale efficiency can thus be changed by altering the inputs used in the production process or alternatively by reducing the amount of outputs required. Given the cuts in government expenditure to municipalities for the maintenance and renewal of existing infrastructure it is likely that the focus on new infrastructure building programmes will not yield optimal scale efficiency, nor will the continued use of existing infrastructure bear optimal efficiency.

Pure technical efficiency, on the other hand, is efficiency which is directly affected by the management of an organisation (Sarmiento, Renneboog, & Matos, 2017). This is referred to as managerial efficiency in this paper for ease of reference. A technically inefficient unit could, for example, come about as a result of a lack of capacity (skills) amongst management to allocate inputs correctly. Technical efficiency is the product of scale and pure technical (or managerial) efficiency. A unit which is able to optimise scale efficiency and managerial efficiency is thus said to be 100 per cent technically efficient at the current technology level.

Technological efficiency refers to efficiency which is influenced by the level of technology used in the production process, such as the technology used in the production of electricity or the technology used in the sewerage system. This type of efficiency can be increased by introducing new technologies into the production process, which could reduce the cost of existing inputs or replace existing inefficient inputs altogether.

Finally, technical efficiency and technological efficiency are then combined to obtain total factor productivity, which is the MPI. The total factor productivity frontier is also referred to as the “best practice frontier” and would be presented by a value of one in the analysis results, while a value smaller than one would indicate an increase in efficiency and a value greater than one, a decrease in efficiency (Sarmiento *et al*, 2017).

Important to note, however, is that the optimal level of efficiency is not explicitly known, and this is often the case in reality. The model can thus only identify whether a unit is operating at a more or less optimal (efficient) level than the next. Units which are 100 per cent efficient are referred to as best practice units in this context, although comparing the same units in another context might result in the identification of inefficiencies in these best practice units. Inefficient units can thus take some important lessons from best practice units, although there is likely to be room for improvement in these best practice units themselves.

This paper made use of public investment data from 2012³¹, which is the year in which the NIP was implemented, to the most recent year for which data are available, i.e., 2017. The output indicators selected to examine the efficiency levels of LG represent the set of services that municipalities are constitutionally mandated to provide citizens in their jurisdiction. Using criteria from the Constitution and the Municipal Structures Act, 1998 (Act No. 117 of 1998), this study disaggregates infrastructure into four major output indicator categories that reflect the impact of infrastructure investments on the socio-economic wellbeing of residents in municipal jurisdictions.

These indicators will thus capture the number of households with access to municipal services of (i) water, (ii) electricity, (iii) sewerage and sanitation, and (iv) solid waste management. Additionally, a socio-economic variable is included in the nonparametric model, which is the size of the population which lives in each municipality. According to Pecin (2014), this variable is included under the hypothesis that population size enables municipalities to decide on how to focus their mandated functions relating to the provision of basic services and affects variations in the level of service charges. In addition, the size of the population also affects the amount of money which is allocated to municipalities via the equitable share formula as well as via conditional grants (National Treasury, 2012).

For the input variables, this study uses expenditures on the respective output categories to represent the resources consumed by municipalities in the provision of mandated services and in fulfilling their administrative tasks. These include expenditure on new assets, the renewal of existing assets, and repairs and maintenance of existing assets.

Given the number of municipalities in the country, the number of variables included in the model, as well as the time periods under consideration, results were run in a disaggregated fashion for ease of interpretation and reporting, by service provided and province. The MPI was calculated separately for each of the municipal service outputs, and only expenditure specifically related to that municipal service was considered. For instance, for the provision of water, the number of households who have access to water was considered as the output variable. The input variables included the number of households in the municipality, the amount of money that municipality had spent acquiring new assets in relation to the provision

³¹ The municipal finance data provided by the National Treasury is available by financial year end. In other words, data for 2012 refers to data for the financial year end which would have occurred in 2012.

of water, the amount they had spent on the renewal of existing water infrastructure, and the amount spent on repairs and maintenance of water infrastructure.

The data used in this study was collated using information from Stats SA's non-financial census of municipalities and the 2016 community survey data, population figures for each municipality, and the National Treasury's municipal finance data.

Many municipalities were excluded from the analysis due to the missing data relating to one or more of the variables. These municipalities were removed, as the MPI requires a balanced panel for analysis. Furthermore, a limitation of the analysis includes the fact that the quality of the services cannot be measured with the data or methods used.

Results

The results obtained are presented in the Appendix to this chapter on page 209. Each table presents the geometric means of the municipalities' MPI over the six-year period, as well as the average of those means by province.

Table 48 represents the results for water infrastructure and indicates that over the six-year period, only two provinces (the Northern Cape and the North West) have managed to increase their managerial efficiency, although none were 100 per cent efficient in relation to this indicator. Furthermore, only Gauteng and KwaZulu-Natal became more efficient with regards to changes in technology.

In terms of the size of operations, the Western Cape, Northern Cape and Limpopo became more inefficient. With the exception of Limpopo, these provinces have large land masses, and the provision of infrastructure would thus require careful planning to ensure that scale is achieved through the infrastructure that is invested in. Most of the municipalities which are responsible for the overall inefficient mean are outside of the main urban areas of these provinces, such as Richtersveld, Kareenerg, !Kheis, Matzikama, Hessequa, Langeberg, and Bitou LMs.

Overall, Gauteng and KwaZulu-Natal were the only provinces which became more inefficient in relation to the MPI, or total factor productivity. This inefficiency was largely driven by managerial and technological inefficiency. Efforts could thus be directed at ensuring that the decision makers in these areas are adequately equipped to make important decisions in relation to infrastructure investment, as well as having knowledge about which technologies may be able to improve service delivery in relation to water provision.

In Table 49, the MPI and related results are presented for electricity infrastructure investment, by municipality and province. Most notable is that Mpumalanga was 100 per cent efficient in relation to overall managerial efficiency with regards to its electricity infrastructure investment. The province's increased scale and technological inefficiencies also resulted in an overall increase in its total factor productivity (MPI) for the period under consideration. Among the

included municipalities, the only municipality which had a decrease in overall inefficiency was the Mkhondo LM.

The Eastern Cape, which achieved an efficiency score of 0.950 and an MPI of 0.994, also increased its investment efficiency over the period, although not enough to reach a level of 100 per cent efficiency. This efficiency was largely driven by technological efficiency, which could be linked to developments in relation to the province's special economic zones – although these are mainly located in metropolitan municipalities, such as Buffalo City and Nelson Mandela Bay. It is likely, however, that developments in these areas could be spilling over to neighbouring municipalities and providing the basis for the smaller local municipalities to expand on infrastructure investment undertaken within these economic areas.

The Free State, the North West and KwaZulu-Natal, on the other hand, became more scale inefficient over the period. In KwaZulu-Natal and the Free State this inefficiency was accompanied by managerial inefficiency as well. This is translated into an overall decrease in inefficiency for these provinces.

Other provinces in which managerial inefficiencies were present were Gauteng, Limpopo, and the Western Cape. These provinces would thus benefit greatly from increasing their managerial capacity, given that electricity is supplied via a centralised system.

All the provinces became more efficient with regards to total factor productivity, although none have reached an optimal level of efficiency, and they would thus gain from looking more closely at the problem areas in specific municipalities to determine where improvements can be made.

Sewerage reticulation and purification infrastructure investment is presented in Table 50. This table shows that most of the provinces became more scale inefficient over the period under consideration. This scale inefficiency was accompanied by a decline in managerial inefficiency for the Free State, Limpopo, and the North West.

The Eastern Cape and Mpumalanga, on the other hand, managed to achieve greater managerial and scale efficiency over the period, resulting in an increase in overall efficiency. These provinces managed to increase efficiency in relation to their total factor productivity, and Mpumalanga was almost 100 per cent efficient in relation to its MPI, although it experienced a decline in its technological efficiency.

All of the provinces experienced an increase in their MPIs for the period under consideration, indicating that modifications to the individual efficiency indicators in the relevant municipalities will greatly increase efficiency in their sewerage investment infrastructure.

In relation to solid waste management, presented in Table 51, five of the nine provinces became more scale inefficient, although this deterioration was small for the Eastern Cape and KwaZulu-Natal.

However, in addition to a decline in scale efficiency, KwaZulu-Natal also deteriorated in terms of its managerial inefficiency. So did the Free State, Gauteng, and the North West province (the North West deterioration was marginal). The Western Cape, on the other hand, managed to achieve 100 per cent efficiency in terms of its investment in solid waste infrastructure.

It is worth noting that all the provinces managed to achieve an increase in their total factor productivity and technological efficiency (with the exception of the Northern Cape), despite the decreases in scale and managerial inefficiencies. However, in solid waste management, many municipalities recorded no spending on solid waste infrastructure, despite the number of households gaining access to these services increasing for some. For instance, the uMngeni local municipality in KwaZulu-Natal increased household access to solid waste infrastructure from 14 493 households in 2012 to 22 136 households in 2017 with no spending on new infrastructure. This municipality, however, also reported scale and technological inefficiency which indicates that the number of households which are serviced through the existing infrastructure could possibly be increased. Given that the reported population of the province was 37 352 households, 40 per cent of the households do not have access to solid waste infrastructure in the province. Although given that the municipality could increase access to more households without investment in new infrastructure or the expansion of existing infrastructure, the municipality will definitely gain from using existing resources more efficiently.

Overall, consistent trends are noticeable for Gauteng and KwaZulu-Natal. KwaZulu-Natal had scale inefficiencies for each service, with the exception of water provision, while Gauteng produced managerial inefficiencies across all infrastructure types. Given the scale at which these trends were observed, it might indicate that these problems are not mere issues at the municipal level, but might be issues apparent at the provincial level as well. These provinces will thus be well advised to address issues in relation to scale and managerial inefficiencies at the provincial level.

The paper provided an analysis of how efficient spending on infrastructure is within the South African LG sphere. The model used in the paper did so by comparing municipalities to one another and determining which had become relatively more or less efficient in their provision of infrastructure, given the amount of resources invested in the provision of infrastructure.

Although the results provided valuable outputs in relation to the efficiency of each municipality over time (presented in the Appendix to chapter 9 on page 209, the large number of observational units included in the study does not indicate how efficiency for each municipality can be increased.

This limitation relates to the fact that *relative* efficiency does equate to *optimal* efficiency. Thus, municipalities which are relatively inefficient are simply *less* efficient compared to *more* efficient municipalities. This constitutes a benchmarking exercise which requires that relatively

efficient units are studied more diligently in order to possibly assist less efficient units, through the study of best practice, to improve whichever part of their processes is lacking.

How to increase efficiency will thus differ by municipality, depending on the challenges faced within the municipality, but a thorough analysis of best-practice or well-performing municipalities will also be required.

Recommendations

With respect to infrastructure investment efficiency, the Commission makes the following recommendations:

1. The MECs of provincial COGTAs should strengthen the existing infrastructure delivery intergovernmental forums to facilitate peer learning of best infrastructure management practices across municipalities and to foster coordinated infrastructure planning.

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Appendix to chapter 9

Table 48: Water infrastructure

	Malmquist Index (MPI)	Δ Technical efficiency	Δ Technological efficiency	Δ Pure technical efficiency	Δ scale efficiency
Eastern Cape					
Camdeboo	0.622	0.911	0.695	1.000	0.911
Blue Crane Route	0.741	1.112	0.577	1.141	0.974
Makana	1.010	0.879	1.149	0.921	0.955
Ndlambe	1.149	0.999	1.150	0.985	1.013
Sunday River	0.935	0.942	0.993	0.987	0.955
Kouga	0.500	0.984	0.508	0.982	1.001
Mean	0.826	0.971	0.845	1.003	0.968
Free State					
Letsemeng	1.002	1.032	0.970	1.000	1.032
Kopanong	0.927	0.956	0.970	1.000	0.956
Mohokare	0.974	0.982	0.992	1.182	0.831
Masilonyana	1.000	1.008	0.992	1.073	0.939
Tokologo	0.961	0.961	0.999	0.901	1.067
Matjhabeng	0.959	1.015	0.945	1.000	1.015
Nala	0.999	1.051	0.951	1.000	1.051
Dihlabeng	1.003	1.011	0.993	1.057	0.956
Nketoana	0.856	0.801	1.068	0.823	0.974
Maluti-A-Phofung	0.729	0.718	1.015	0.761	0.943
Phumelela	0.911	0.905	1.007	1.000	0.905
Mantsopa	1.073	1.385	0.775	1.352	1.024
Moqhaka	1.320	1.362	0.969	1.088	1.252
Mean	0.978	1.014	0.973	1.018	0.996
Gauteng					
Emfuleni	1.024	1.162	0.855	1.177	0.988
Midvaal	0.763	0.868	0.904	0.877	0.990
Lesedi	2.582	1.019	2.522	1.005	1.014
Mogale City	0.644	0.994	0.600	1.009	0.985
Mean	1.253	1.011	1.220	1.017	0.994
Kwa-Zulu Natal					
Msunduzi	1.339	0.929	1.441	1.001	0.928
Newcastle	0.779	1.010	0.772	1.006	1.003
uMhlathuze	1.161	0.990	1.179	0.992	0.998
Mean	1.093	0.976	1.131	1.000	0.977
Limpopo					
Polokwane	0.971	0.991	0.980	0.986	1.005
Thabazimbi	0.823	1.010	0.813	0.993	1.017
Lephalale	0.965	1.048	0.899	1.000	1.048
Bela-Bela	1.116	0.977	1.071	1.037	0.943
Mean	0.969	1.006	0.941	1.004	1.003
Mpumalanga					
Albert Luthuli	0.954	0.973	0.980	0.961	1.012
Msukaligwa	1.002	1.029	0.974	0.926	1.110
Mkhondo	1.005	1.006	0.998	0.997	1.009
Dr. Pixley Ka Isaka Seme	0.979	0.967	1.013	0.992	0.975
Lekwa	0.960	0.947	1.013	0.911	1.039
Dipaleseng	1.302	1.065	1.230	1.051	1.013
Govan Mbeki	0.945	1.022	0.920	1.101	0.929
Victor Khanye	0.981	0.978	1.003	1.016	0.963

Emalahleni	1.197	0.956	1.252	0.928	
Steve Tshwete	0.789	0.946	0.834	0.976	0.969
Emakhazeni	0.888	1.084	0.819	1.062	1.021
Thembisile	0.913	1.116	0.817	1.168	0.956
Thaba Chweu	0.943	1.079	0.841	1.148	0.940
Mean	0.989	1.013	0.977	1.018	0.995
Northern Cape					
Richtersveld	0.995	0.927	1.074	0.859	1.079
Nama Khoi	0.947	0.878	1.079	0.895	0.981
Kamiesberg	0.900	0.860	1.047	0.920	0.934
Hantam	1.022	0.960	1.064	0.985	0.975
Karoo Hoogland	0.968	0.966	1.002	1.098	0.880
Khâi-Ma	0.970	0.964	1.006	0.967	0.997
Ubuntu	0.896	0.891	1.006	1.033	0.863
Umsobomvu	0.964	0.954	1.010	1.020	0.936
Emthanjeni	0.917	0.875	1.049	0.859	1.019
Kareeberg	1.146	1.124	1.019	1.114	1.009
Thembelihle	0.984	0.957	1.028	0.924	1.035
Siyathemba	1.021	0.989	1.032	0.947	1.044
Siyancuma	1.046	1.207	0.866	1.098	1.099
Kai !Garib	0.833	0.954	0.874	0.933	1.022
!Kheis	0.942	1.088	0.866	1.023	1.063
Tsantsabane	0.984	1.138	0.864	1.000	1.138
Kgatelopele	0.958	1.021	0.938	1.030	0.991
Sol Plaatjie	0.956	1.081	0.884	1.023	1.057
Dikgatlong	0.937	0.992	0.944	0.954	1.041
Magareng	0.955	1.002	0.953	1.054	0.950
Mean	0.967	0.991	0.980	0.987	1.006
North West					
Moretele	0.995	1.053	0.946	1.064	0.989
Madibeng	0.938	0.932	1.007	0.968	0.963
Rustenburg	0.926	0.916	1.012	0.931	0.983
Kgetlengrivier	0.932	0.897	1.039	0.925	0.969
Moses Kotane	0.987	0.994	0.992	1.003	0.991
Ratlou	1.043	1.066	0.978	1.088	0.980
Tswaing	0.980	1.004	0.976	0.988	1.016
Mahikeng	0.927	0.962	0.964	0.972	0.990
Ditsobotla	0.948	0.967	0.981	0.963	1.005
Ramotshere Moiloa	0.960	0.989	0.971	1.019	0.970
Naledi	1.026	1.050	0.977	1.008	1.041
Mamusa	0.934	0.957	0.976	0.910	1.052
Greater Taung	0.987	1.008	0.980	1.007	1.001
Mean	0.968	0.984	0.984	0.988	0.996
Western Cape					
Matzikama	0.751	0.995	0.755	0.954	1.043
Cederberg	0.917	0.903	1.016	0.992	0.910
Bergrivier	0.907	0.969	0.937	0.969	0.999
Saldanha Bay	1.004	1.129	0.889	1.040	1.085
Swartland	0.976	1.264	0.772	0.847	1.492
Witzenberg	1.092	1.246	0.876	1.013	1.230
Drakenstein	0.904	1.152	0.784	1.002	1.149
Stellenbosch	0.960	1.118	0.859	1.046	1.069
Breede Valley Local Municipality	0.963	1.018	0.946	1.237	0.823
Langeberg	0.953	0.979	0.973	0.979	1.001
Theewaterskloof	0.967	1.005	0.962	1.097	0.916

Overstrand	0.934	0.984	0.949	1.016	0.968
Cape Agulhas	0.911	0.914	0.997	1.146	0.797
Swellendam	0.980	0.975	1.005	1.098	0.888
Kannaland	0.971	0.964	1.008	0.985	0.978
Hessequa	0.943	0.975	0.968	0.965	1.010
Mossel Bay	1.029	1.260	0.817	1.165	1.081
George	1.042	1.202	0.867	1.189	1.011
Oudtshoorn	0.990	1.164	0.851	1.092	1.047
Bitou	0.899	1.099	0.818	1.033	1.064
Mean	0.955	1.066	0.903	1.043	1.028

Table 49: Electricity infrastructure

	Malmquist Index (MPI)	Δ Technical efficiency	Δ Technological efficiency	Δ Pure technical efficiency	Δ scale efficiency
Eastern Cape					
Camdeboo	0.984	0.984	1.000	1.071	0.919
Blue Crane Route	0.919	0.919	1.000	1.044	0.881
Makana	0.957	0.957	1.000	1.073	0.892
Ndlambe	0.992	0.992	1.000	1.009	0.983
Sundays River Valley	0.971	0.955	1.017	1.333	0.716
Kouga	0.952	0.902	1.055	0.925	0.976
Kou-Kamma	0.880	0.835	1.054	0.782	1.068
Mbhashe	0.756	0.713	1.061	0.661	1.079
Mnquma	1.010	0.967	1.044	0.950	1.017
Great Kei	0.965	0.982	0.982	1.012	0.970
Amahlathi	0.991	0.992	0.998	1.022	0.971
Ngqushwa	0.967	0.977	0.989	1.034	0.945
Inxuba Yethemba	0.932	0.944	0.987	0.964	0.979
Intsika Yethu	0.919	0.943	0.975	0.964	0.978
Emalahleni	1.006	1.067	0.942	0.992	1.076
Engcobo	0.926	0.974	0.950	1.163	0.837
Elundini	0.962	1.022	0.942	1.071	0.954
Senqu	0.839	0.868	0.967	0.881	0.986
Ngquza Hill	0.934	0.947	0.986	0.993	0.953
Port St Johns	0.981	0.997	0.984	0.857	1.163
Nyandeni	0.957	0.976	0.981	0.975	1.001
Mhlontlo	0.965	0.977	0.988	0.970	1.007
Mean	0.944	0.950	0.996	0.988	0.971
Free State					
Letsemeng	1.006	0.789	1.274	0.947	0.834
Kopanong	0.955	0.836	1.143	0.959	0.871
Mohokare	0.994	1.095	0.908	1.120	0.978
Masilonyana	0.945	1.225	0.772	0.991	1.236
Tokologo	0.938	1.058	0.886	0.930	1.138
Matjhabeng	0.999	0.954	1.047	0.949	1.005
Nala	0.935	0.908	1.030	1.016	0.893
Dihlabeng	0.996	0.967	1.030	1.097	0.881
Nketoana	0.959	0.936	1.024	0.936	1.000
Maluti-A-Phofung	0.972	1.006	0.966	0.986	1.020
Phumelela	0.966	1.192	0.810	1.092	1.092
Mantsopa	0.827	1.187	0.696	1.028	1.155
Mean	0.958	1.013	0.966	1.004	1.009
Gauteng					
Emfuleni	1.236	1.021	1.211	1.116	0.915
Midvaal	0.820	0.794	0.937	0.892	0.890
Lesedi	1.126	1.000	1.126	1.000	1.000
Mogale City	0.615	1.026	0.600	1.000	1.026
Mean	0.949	0.960	0.968	1.002	0.957
KwaZulu-Natal					
Umdoni	0.937	0.983	0.953	0.973	1.010
Umzumbe	0.981	1.027	0.955	1.032	0.996
uMuziwabantu	0.911	0.953	0.956	0.938	1.015

uMshwathi	0.991	1.025	0.967	1.047	0.979
uMngeni	1.000	1.051	0.952	1.026	1.024
Mpofana	0.917	0.949	0.966	0.980	0.968
Impendle	0.985	1.100	0.896	1.038	1.060
Msunduzi	0.797	0.891	0.894	0.879	1.014
Mkhambathini	0.924	1.027	0.899	0.972	1.057
Richmond	0.913	1.022	0.894	0.967	1.056
Okhahlamba	0.887	0.993	0.894	0.996	0.997
Endumeni	0.849	0.959	0.885	0.912	1.051
Nquthu	0.964	0.977	0.987	1.018	0.960
Msinga	1.003	1.012	0.991	1.018	0.995
Umvoti	0.997	1.000	0.997	0.982	1.018
Newcastle	0.966	0.968	0.998	0.956	1.013
eMadlangeni	0.958	0.968	0.989	1.001	0.967
Dannhauser	0.845	0.851	0.993	0.838	1.015
eDumbe	1.000	1.051	0.951	1.216	0.864
eDumbe	0.978	1.021	0.958	1.061	0.963
uPhongolo	0.936	0.976	0.959	1.090	0.895
Abaqulusi	0.869	0.917	0.948	0.988	0.928
Nongoma	0.948	0.995	0.952	1.047	0.951
Ulundi	0.882	0.930	0.948	1.017	0.915
Jozini	0.977	1.043	0.938	1.108	0.941
uMfolozi	0.982	1.864	0.527	1.295	1.439
uMhlathuze	0.982	1.844	0.532	1.524	1.210
uMlalazi	0.815	1.529	0.533	1.034	1.479
Mthonjaneni	0.741	1.360	0.545	0.920	1.479
Nkandla	0.958	1.655	0.579	1.147	1.442
Mandeni	0.924	1.644	0.562	1.070	1.536
Mean	0.930	1.116	0.871	1.035	1.072
Limpopo					
Greater Giyani	0.981	0.601	1.634	0.679	0.885
Greater Letaba	0.950	0.576	1.649	0.909	0.634
Greater Tzaneen	1.059	0.772	1.372	0.966	0.799
Ba-Phalaborwa	0.842	0.735	1.145	0.834	0.882
Maruleng	0.985	0.971	1.015	1.286	0.755
Musina	0.998	0.837	1.193	0.811	1.032
Thulamela	1.018	1.029	0.990	1.026	1.003
Makhado	0.982	0.991	0.990	1.000	0.991
Blouberg	0.965	0.970	0.995	1.029	0.942
Molemole	0.988	0.972	1.016	0.994	0.978
Polokwane	0.972	0.890	1.093	0.967	0.920
Lepelle-Nkumpi	0.968	0.927	1.044	1.012	0.916
Thabazimbi	1.036	1.048	0.989	1.010	1.038
Lephalale	0.876	1.009	0.868	0.950	1.062
Bela-Bela	0.962	1.012	0.950	0.984	1.028
Mogalakwena	0.945	1.012	0.933	0.988	1.025
Mean	0.971	0.897	1.117	0.965	0.931
Mpumalanga					
Albert Luthuli	0.978	0.904	1.082	0.811	1.114
Msukaligwa	0.993	0.930	1.068	0.981	0.948
Mkhondo Local	1.007	0.991	1.016	1.016	0.975
Dr. Pixley Ka	0.993	1.068	0.929	1.201	0.889
Lekwa	0.953	1.021	0.934	1.012	1.008

Dipaleseng	0.977	1.027	0.952	1.030	0.997
Govan Mbeki	0.983	1.033	0.952	1.186	0.871
Victor Khanye	0.843	0.882	0.956	0.980	0.900
Emalahleni	0.934	0.973	0.960	0.807	1.205
Steve Tshwete	0.971	1.012	0.960	1.005	1.007
Emakhazeni	0.987	0.989	0.998	1.005	0.984
Thembisile	0.949	0.957	0.991	0.958	0.999
Mean	0.964	0.982	0.983	1.000	0.991
Northern Cape					
Richtersveld	1.033	0.908	1.138	1.050	0.865
Nama Khoi	0.881	0.754	1.169	0.799	0.943
Kamiesberg	0.987	0.830	1.189	0.904	0.918
Hantam	0.989	0.846	1.169	0.894	0.947
Karoo	0.951	1.140	0.834	1.207	0.944
Hoogland					
Khâi-Ma	1.107	1.389	0.797	1.502	0.925
Ubuntu	0.948	1.247	0.760	1.354	0.921
Umsobomvu	0.976	1.270	0.768	1.201	1.058
Emthanjeni	0.949	0.949	1.000	0.949	1.000
Kareeberg	0.947	0.947	1.000	0.934	1.014
Thembelihle	0.989	0.989	1.000	0.904	1.095
Siyathemba	0.912	0.912	1.000	0.800	1.140
Siyancuma	1.036	0.881	1.176	0.870	1.012
Kai	0.900	0.777	1.158	0.794	0.979
!Kheis	0.969	0.817	1.186	0.858	0.953
Tsantsabane	1.010	0.867	1.165	1.019	0.851
Kgatelopele	0.988	1.079	0.916	0.936	1.153
Sol Plaatjie	0.986	1.111	0.887	1.052	1.056
Dikgatlong	0.949	1.070	0.887	1.004	1.065
Magareng	0.973	1.039	0.936	1.040	0.999
Mean	0.974	0.991	1.007	1.004	0.992
North West					
Moretele	0.993	0.993	1.000	1.054	0.942
Madibeng	0.940	0.940	1.000	0.976	0.963
Rustenburg	0.991	0.991	1.000	0.996	0.995
Kgetlengrivier	0.952	0.978	0.973	1.020	0.959
Moses Kotane	0.983	0.986	0.997	1.035	0.953
Ratlou	0.959	1.006	0.954	1.030	0.976
Tswaing	0.973	1.003	0.971	1.017	0.986
Mahikeng	0.998	1.015	0.983	0.964	1.052
Ditsobotla	0.979	0.995	0.984	0.972	1.023
Ramotshere	0.970	0.925	1.049	0.964	0.959
Moiloa					
Naledi	0.948	0.921	1.029	0.997	0.924
Mamusa	0.935	0.932	1.004	0.967	0.963
Greater Taung	0.958	1.016	0.942	0.979	1.039
Lekwa-Teemane	0.933	1.017	0.917	0.999	1.018
Mean	0.965	0.980	0.986	0.998	0.982
Western Cape					
Matzikama	0.891	1.053	0.847	1.020	1.032
Cederberg	0.967	1.046	0.925	1.029	1.016
Bergrivier	0.923	0.990	0.934	1.000	0.990
Saldanha Bay	0.886	1.086	0.816	1.072	1.013
Swartland	1.024	1.111	0.922	1.133	0.981
Witzenberg	1.046	1.067	0.980	1.051	1.015

Drakenstein	1.063	1.098	0.967	1.006	1.091
Stellenbosch	0.929	1.018	0.913	0.929	1.095
Breede Valley	0.938	0.945	0.992	0.857	1.103
Langeberg	0.945	0.953	0.992	1.018	0.936
Theewaterskloof	0.984	0.987	0.997	1.034	0.955
Overstrand	1.033	1.038	0.995	1.042	0.995
Cape Agulhas	0.992	0.959	1.034	1.006	0.954
Swellendam	1.001	1.000	1.000	1.005	0.995
Kannaland	1.021	1.004	1.017	1.044	0.961
Hessequa	1.011	0.977	1.034	1.003	0.974
Mossel Bay	0.957	1.110	0.913	1.365	0.813
George	0.932	1.066	0.874	1.205	0.885
Oudtshoorn	0.938	1.037	0.904	0.926	1.120
Bitou	1.004	1.034	0.970	1.044	0.991
Mean	0.974	1.029	0.951	1.039	0.996

Table 50: Sewerage purification and reticulation

	Malmquist Index	Δ Technical efficiency	Δ Technological efficiency	Δ Pure technical efficiency	Δ scale efficiency
Eastern Cape					
Camdeboo	0.847	0.946	0.929	0.909	1.041
Blue Crane Route	1.019	0.958	0.952	1.083	0.884
Makana	0.929	0.943	0.985	0.846	1.115
Ndlambe	1.036	1.185	0.874	1.207	0.981
Sundays River Valley	0.813	0.843	1.068	0.889	0.913
Kouga	0.464	0.842	0.576	0.872	0.966
Mean	0.851	0.953	0.897	0.968	0.984
Free State					
Letsemeng	1.091	0.938	1.162	0.956	0.981
Kopanong	0.907	0.861	1.054	0.944	0.912
Mohokare	1.013	1.087	0.932	1.055	1.030
Masilonyana	0.908	1.002	0.906	0.986	1.016
Tokologo	0.866	0.901	0.961	0.961	0.938
Matjhabeng	0.998	1.033	0.967	1.181	0.875
Nala	0.968	1.001	0.967	1.029	0.973
Dihlabeng	0.946	0.969	0.976	0.948	1.023
Nketoana	0.935	0.976	0.958	0.956	1.021
Maluti-A-Phofung	0.972	1.010	0.963	0.987	1.023
Phumelela	1.041	1.468	0.709	1.115	1.316
Mantsopa	1.041	1.468	0.709	1.115	1.316
Mean	0.974	1.059	0.939	1.019	1.035
Gauteng					
Emfuleni	1.031	1.300	0.863	1.000	1.300
Midvaal	0.866	0.843	1.063	1.000	0.843
Lesedi	0.911	0.895	1.028	1.022	0.866
Mogale City	1.009	0.989	1.022	1.012	0.975
Mean	0.954	1.007	0.994	1.008	0.996
KwaZulu-Natal					
Msunduzi	0.993	0.946	1.050	0.966	0.979
Newcastle	0.986	0.986	1.000	0.946	1.042
Mean	0.990	0.966	1.025	0.956	1.011
Limpopo					
Polokwane	0.956	0.978	0.978	0.943	1.037
Thabazimbi	0.926	1.125	0.822	1.000	1.125
Lephalale	0.928	0.918	1.011	1.009	0.910
Bela-Bela	0.935	1.107	0.820	1.059	1.046
Mean	0.936	1.032	0.908	1.003	1.030
Mpumalanga					
Albert Luthuli	0.926	0.972	0.952	0.936	1.039
Msukaligwa	1.004	1.043	0.963	1.020	1.022
Mkhondo	0.963	0.989	0.973	0.960	1.030
Dr. Pixley Ka	0.969	0.969	1.000	1.027	0.943
Lekwa	0.899	0.899	1.000	1.015	0.886
Dipaleseng	1.063	1.234	0.861	1.094	1.128
Govan Mbeki	0.924	1.166	0.792	1.322	0.882
Victor Khanye	0.912	0.848	1.076	0.894	0.948
Emalahleni	1.061	0.680	1.560	0.730	0.931
Steve Tshwete	1.203	0.867	1.388	0.884	0.980

Emakhazeni	0.987	1.025	0.963	0.996	1.029
Thembisile	0.975	1.011	0.964	1.028	0.984
Mean	0.990	0.975	1.041	0.992	0.983
Northern Cape					
Richtersveld	0.805	0.859	0.937	0.911	0.943
Nama Khoi	0.840	0.872	0.963	0.873	0.999
Kamiesberg	0.799	0.833	0.959	0.847	0.984
Hantam	1.036	1.072	0.966	0.950	1.129
Karoo Hoogland	1.033	1.258	0.821	1.243	1.012
Khâi-Ma	0.969	1.136	0.852	1.108	1.025
Ubuntu	1.054	1.331	0.792	1.078	1.235
Umsobomvu	0.971	1.181	0.822	1.025	1.152
Emthanjeni	0.976	0.976	1.000	1.024	0.953
Kareeberg	0.953	0.953	1.000	0.988	0.965
Thembelihle	0.971	0.971	1.000	0.952	1.020
Siyathemba	0.924	0.924	1.000	0.952	0.970
Siyancuma	0.981	0.874	1.123	0.868	1.006
Kai	1.004	0.858	1.170	0.894	0.960
!Kheis	0.944	0.839	1.126	0.887	0.946
Tsantsabane	1.023	0.913	1.120	1.027	0.889
Kgatelopele	0.989	1.240	0.798	0.989	1.254
Sol Plaatjie	1.000	1.262	0.792	1.156	1.092
Dikgatlong	0.995	1.200	0.829	1.047	1.147
Magareng	0.964	1.162	0.829	0.980	1.185
Mean	0.962	1.036	0.945	0.990	1.043
North West					
Moretele	0.908	1.100	0.826	1.048	1.049
Madibeng	0.875	1.035	0.845	1.086	0.953
Rustenburg	0.896	1.014	0.884	1.002	1.012
Kgetlengrivier	0.976	0.923	1.058	0.912	1.011
Moses Kotane	1.065	0.993	1.073	1.021	0.972
Ratlou	0.939	1.036	0.906	0.963	1.085
Tswaing	0.930	1.147	0.811	0.800	1.412
Mahikeng	0.926	1.093	0.847	1.092	1.019
Ditsobotla	0.977	0.899	1.086	1.274	
Ramotshere Moiloa	0.950	0.820	1.159	1.065	0.770
Naledi	1.042	0.998	1.044	0.977	1.021
Mamusa	0.978	1.029	0.950	1.011	1.017
Greater Taung	0.974	1.032	0.944	0.984	
Mean	0.957	1.009	0.957	1.018	1.029
Western Cape					
Matzikama	1.009	1.087	0.929	1.067	1.018
Cederberg	0.898	0.918	0.979	0.948	0.968
Bergrivier	0.962	1.041	0.924	1.008	1.032
Saldanha Bay	1.134	1.047	1.083	1.083	0.966
Swartland	0.957	0.946	1.012	0.956	0.990
Witzenberg	1.029	1.088	0.945	1.039	1.048
Drakenstein	1.126	1.043	1.044	1.036	1.007
Stellenbosch	1.048	1.104	0.950	0.945	1.168
Breede Valley	0.969	0.995	0.974	1.004	0.991
Langeberg	0.946	0.973	0.972	0.931	1.045
Theewaterskloof	0.967	0.984	0.982	0.986	0.998
Overstrand	0.943	0.978	0.964	1.044	0.938
Cape Agulhas	0.992	1.013	0.979	1.106	0.916
Swellendam	0.977	0.996	0.981	1.269	0.785

Kannaland	0.965	0.984	0.981	0.948	1.038
Hessequa	0.978	1.002	0.976	0.999	1.003
Mossel Bay	0.999	0.947	1.056	1.095	0.864
George	0.859	0.847	1.014	0.942	0.899
Oudtshoorn	1.004	0.919	1.092	1.025	0.897
Bitou	0.929	0.908	1.023	1.011	0.898
Mean	0.985	0.991	0.993	1.022	0.973

Table 51: Solid waste management

	Malmquist Index (MPI)	Δ Technical efficiency	Δ Technological efficiency	Δ Pure technical efficiency	Δ scale efficiency
Eastern Cape					
Camdeboo	0.969	0.969	1.000	0.999	0.970
Blue Crane Route	0.952	0.952	1.000	1.024	0.930
Makana	0.973	0.973	1.000	1.038	0.938
Ndlambe	0.681	0.681	1.000	0.725	0.940
Sundays River Valley	1.023	1.023	1.000	1.050	0.974
Kouga	1.082	1.082	1.000	1.072	1.009
Kou-Kamma	0.432	0.432	1.000	0.417	1.034
Mbhashe	1.062	1.062	1.000	1.024	1.037
Mnquma	0.980	0.980	1.000	0.962	1.019
Great Kei	0.967	1.018	0.950	1.016	1.001
Amahlathi	0.981	1.032	0.950	1.064	0.970
Ngqushwa	0.957	1.007	0.950	1.117	0.902
Inxuba Yethemba	0.830	0.873	0.950	0.954	0.915
Intsika Yethu	0.955	1.011	0.944	1.036	0.976
Emalahleni	0.617	0.658	0.938	0.624	1.055
Engcobo	0.970	1.034	0.938	0.926	1.117
Elundini	1.091	1.164	0.938	1.019	1.142
Senqu	1.020	0.824	0.938	0.742	1.111
Ngquza Hill	1.023	0.927	1.000	0.928	0.999
Port St Johns	1.023	0.997	1.000	0.997	1.000
Nyandeni	1.023	0.957	1.000	0.971	0.985
Mhlontlo	1.023	0.998	1.000	0.998	1.000
Mean	0.938	0.939	0.977	0.941	1.001
Free State					
Letsemeng	0.919	0.919	1.000	0.951	0.966
Kopanong	0.938	0.938	1.000	0.982	0.955
Mohokare	1.075	1.041	1.033	1.096	0.950
Masilonyana	1.008	0.945	1.067	0.986	0.958
Tokologo	0.996	0.933	1.067	0.988	0.945
Matjhabeng	0.994	0.992	1.002	0.989	1.003
Nala	0.914	0.912	1.003	0.912	1.000
Dihlabeng	0.989	0.987	1.002	0.986	1.001
Nketoana	0.993	0.993	1.000	0.998	0.995
Maluti-A-Phofung	0.972	0.972	1.000	0.980	0.992
Phumelela	0.948	2.518	0.377	1.722	1.462
Mantsopa	0.868	2.307	0.376	1.616	1.428
Mean	0.968	1.205	0.911	1.100	1.054
Gauteng					
Emfuleni	0.874	0.914	0.955	1.000	0.914
Midvaal	0.839	1.090	0.770	1.080	1.009
Lesedi	0.950	0.884	1.075	0.973	0.908
Mogale City	0.979	1.052	0.931	0.951	1.106
Mean	0.910	0.985	0.933	1.001	0.984
KwaZulu-Natal					
Umdoni	1.015	0.979	1.036	0.901	1.091
uMuziwabantu	0.803	0.777	1.033	0.740	1.006
uMshwathi	0.996	0.968	1.029	0.934	1.037

uMngeni	0.964	0.930	1.036	0.768	1.211
Mpofana	0.970	0.945	1.026	0.868	1.114
Impendle	0.921	1.006	0.916	1.031	0.984
Msunduzi	1.093	1.272	0.859	1.491	1.051
Mkhambathini	0.998	1.156	0.864	1.071	1.079
Richmond	0.995	1.169	0.851	1.379	0.848
Okhahlamba	0.928	1.080	0.859	1.183	0.914
Endumeni	1.003	1.091	0.920	1.079	0.974
Nquthu	0.750	0.753	0.997	0.763	0.986
Umvoti	0.801	0.805	0.995	0.785	1.026
Newcastle	0.940	0.940	1.000	0.797	1.143
eMadlangeni	0.993	0.998	0.995	0.900	1.109
Dannhauser	0.995	0.999	0.996	0.836	1.195
eDumbe	0.885	1.211	0.731	1.132	1.070
uPhongolo	0.935	1.277	0.733	1.236	1.033
Abaqulusi	0.966	1.308	0.738	1.238	1.037
Nongoma	0.919	1.259	0.730	1.320	0.954
Ulundi	1.046	1.431	0.731	1.533	0.934
Jozini	0.948	1.171	0.810	1.255	0.933
uMfolozi	0.998	1.171	0.852	1.351	0.867
uMhlathuze	0.688	0.807	0.852	1.040	0.777
uMlalazi	0.974	1.142	0.852	1.277	0.894
Mthonjaneni	0.896	1.051	0.852	1.134	0.927
Nkandla	0.984	1.154	0.852	1.155	0.999
Mean	0.941	1.069	0.894	1.081	1.007
Limpopo					
Greater Giyani	0.955	0.955	1.000	0.962	0.993
Greater Letaba	0.928	0.928	1.000	0.964	0.963
Greater Tzaneen	0.994	0.994	1.000	0.994	1.000
Ba-Phalaborwa	1.072	1.215	0.882	1.086	1.120
Maruleng	1.053	1.224	0.860	1.063	1.151
Musina	0.861	1.001	0.860	0.917	1.091
Thulamela	0.909	0.956	0.951	0.942	1.014
Makhado	0.997	0.997	1.000	1.050	0.950
Blouberg	0.939	0.939	1.000	0.975	0.963
Molemole	0.960	0.960	1.000	1.011	0.950
Polokwane	0.839	0.839	1.000	0.844	0.994
Lepelle-Nkumpi	0.996	0.996	1.000	1.002	0.993
Thabazimbi	1.003	1.003	1.000	1.006	0.997
Lephalale	0.971	0.971	1.000	0.971	1.000
Bela-Bela	0.953	0.953	1.000	0.953	1.000
Mogalakwena	0.975	0.975	1.000	0.975	1.000
Mean	0.963	0.994	0.972	0.982	1.011
Mpumalanga					
Greater Giyani	0.955	0.955	1.000	0.962	0.993
Greater Letaba	0.928	0.928	1.000	0.964	0.963
Greater Tzaneen	0.994	0.994	1.000	0.994	1.000
Ba-Phalaborwa	1.072	1.215	0.882	1.086	1.120
Maruleng	1.053	1.224	0.860	1.063	1.151
Musina	0.861	1.001	0.860	0.917	1.091
Thulamela	0.909	0.956	0.951	0.942	1.014
Makhado	0.997	0.997	1.000	1.050	0.950
Blouberg	0.939	0.939	1.000	0.975	0.963

Molemole	0.960	0.960	1.000	1.011	0.950
Polokwane	0.839	0.839	1.000	0.844	0.994
Lepelle-Nkumpi	0.996	0.996	1.000	1.002	0.993
Thabazimbi	1.003	1.003	1.000	1.006	0.997
Lephalale	0.971	0.971	1.000	0.971	1.000
Bela-Bela	0.953	0.953	1.000	0.953	1.000
Mogalakwena	0.975	0.975	1.000	0.975	1.000
Mean	0.963	0.994	0.972	0.982	1.011
Northern Cape					
Richtersveld	0.983	0.983	1.000	0.984	0.999
Nama Khoi	0.963	0.963	1.000	0.964	0.999
Kamiesberg	0.896	0.896	1.000	0.897	0.999
Hantam	0.997	0.997	1.000	0.999	0.998
Karoo Hoogland	1.002	1.002	1.000	0.951	1.053
Khâi-Ma	1.065	1.065	1.000	1.002	1.063
Ubuntu	1.030	1.030	1.000	0.934	1.103
Umsobomvu	0.874	0.874	1.000	0.693	1.262
Emthanjeni	0.978	0.978	1.000	1.016	0.963
Kareeberg	0.980	0.980	1.000	1.026	0.955
Thembelihle	0.975	0.975	1.000	1.003	0.972
Siyathemba	0.919	0.919	1.000	0.937	0.982
Siyancuma	1.016	0.933	1.089	0.963	0.969
Kai !Garib	1.027	0.943	1.089	1.015	0.929
!Kheis	0.952	0.874	1.089	0.959	0.912
Tsantsabane	0.969	0.889	1.089	0.969	0.918
Kgatelopele	0.992	0.992	1.000	1.021	0.972
Sol Plaatjie	1.000	1.000	1.000	1.021	0.980
Dikgatlong	0.992	0.992	1.000	1.027	0.965
Magareng	0.998	0.998	1.000	1.040	0.960
Mean	0.980	0.964	1.018	0.971	0.998
North West					
Madibeng	0.946	1.088	0.870	0.981	1.109
Rustenburg	0.964	1.117	0.863	1.033	1.081
Kgetlengrivier	0.995	1.109	0.897	1.023	1.084
Moses Kotane	0.991	1.083	0.915	1.053	1.028
Tswaing	1.021	1.161	0.880	1.044	1.111
Mahikeng	0.891	1.097	0.813	0.956	1.147
Ditsobotla	0.937	1.153	0.813	1.069	1.079
Ramotshere Moiloa	0.984	0.984	1.000	1.013	0.971
Naledi	0.941	0.941	1.000	0.941	1.000
Mamusa	0.993	0.993	1.000	0.994	0.999
Greater Taung	1.000	1.000	1.000	1.002	0.998
Lekwa-Teemane	0.999	0.999	1.000	0.999	1.000
Mean	0.972	1.060	0.921	1.009	1.051
Western Cape					
Matzikama	0.975	0.985	0.990	0.979	1.006
Bergrivier	0.979	0.989	0.990	0.982	1.006
Bergrivier	0.955	0.964	0.990	0.963	1.001
Saldanha Bay	0.952	0.961	0.990	0.959	1.003
Swartland	0.994	1.047	0.949	1.003	1.044
Witzenberg	1.070	1.127	0.949	1.064	1.060
Drakenstein	1.022	1.077	0.949	1.051	1.024

Stellenbosch	1.020	1.075	0.949	0.999	1.077
Breede Valley	0.986	0.897	1.099	0.896	1.002
Langeberg	0.966	0.889	1.086	0.888	1.002
Theewaterskloof	0.937	0.855	1.096	0.948	0.902
Overstrand	0.930	0.856	1.087	0.886	0.965
Cape Agulhas	0.930	0.951	0.977	0.971	0.980
Swellendam	0.994	1.031	0.964	1.068	0.966
Kannaland	1.066	1.091	0.977	1.038	1.051
Hessequa	0.983	1.014	0.969	1.003	1.011
Mossel Bay	1.000	1.023	0.978	1.093	0.936
George	0.936	0.938	0.998	1.103	0.850
Oudtshoorn	0.996	1.018	0.979	1.049	0.970
Bitou	0.971	0.992	0.979	1.060	0.936
Mean	0.983	0.989	0.997	1.000	0.990

Chapter 10

Local government structure: The city region and its potential to address South Africa's development challenges

Thando Ngozo

Introduction and background

The first democratic government inherited a very weak economy that was marred by high levels of unemployment, income inequality, and widespread poverty. South Africa, at the time of the political transition, was one of the most unequal countries in the world. Approximately 90 to 95 per cent of wealth was owned by 10 per cent of the population. Flagrant social inequalities were mirrored in deep spatial disparities imprinted into the landscape of cities and regions. In 1996, the central core of the metropolitans, major secondary cities, some mining towns, tourism belts and certain parts of the Bantustans accounted for almost 80 per cent of gross value added (GVA) and 54 per cent of the population (Orthofer, 2016; Philip *et al*, 2014).

Urban reconfiguration and township modification rapidly found expression in the objectives for the post-1994 government (Harrison & Todes, 2015; NPC, 2012). In 2000, a patchy piecemeal of small municipalities was amalgamated to form large authorities, hypothetically with improved administrative capabilities and the latitude to redistribute resources from wealthy to disadvantaged populations. Consequently, municipal powers were extended to incorporate social and economic development, and local tax revenues were supplemented by national grants (National Treasury, 2017).

While most public services have improved throughout the country since 1994, disparities continue to prevail within and between municipalities. These mirror discrepancies in economic conditions and institutional capacity. Integrated development across government has been a prominent objective, but implementation has consistently fallen short (Bhorat *et al*, 2014; Harrison, Todes, and Watson, 2008; Presidency, 2014). Coordination and collaboration of activities has been poor at all levels. There has been a lack of a coherent development philosophy or strategy for the country, translating in incongruent policies and priorities between departmental silos and spheres of government (Jonas, 2017; NPC, 2012).

This silo approach is further manifested in the South African developmental system which is dominated by inter-sectoral planning involving all three government spheres. As a result, major emphasis has been placed on provincial growth and development strategies (PGDS) and municipal integrated development plans (IDPs) as important requirements for funding. This preoccupation with political jurisdictions, particularly at the local level, typically means that growth and development is locked into official jurisdictions. While there have been efforts to

co-ordinate and enhance inter-sectoral planning, resources continue to be allocated in a manner that locks them in sector line departments. This results in inter-jurisdictional collaboration being totally neglected thus elevating destructive competition. In such a system, the preoccupation with official jurisdictions impede the growth and development of city regions. The term city region mirrors associations of multiple municipalities and scales of government in which responsibility for urban development is distributed, both formally and informally.

Internationally, there is a growing recognition of the need to plan and promote development across sub national and national boundaries to support the development and growth of city regions. Europe, for instance, has historically moved from sectoral policies to a territorial policy approach (Deas and Giordano, 2003). The United Kingdom, in particular, has merged municipal cities into city regions and they continuously contest for private resources and public grants as such (Jonas and Ward 2002).

City regions are particularly valuable in transforming marginal regions through availing of economic opportunities thus balancing national development outcomes. They possess the potential for developing economic opportunities and improving national development outcomes. They could also attain the best possible spatial pattern of development.

Despite city regions gaining attraction internationally, owing to their definite benefits, the concept is yet to garner realistic interest in South Africa. This leads to a number of research questions that this chapter will attempt to answer. The three overarching research questions are:

- Why is the city regions development pathway not institutionalised in South Africa?
- What are the constraints and challenges for city regions in South Africa?
- How can city regions be incentivised in South Africa?

It is vital to examine means through which urban challenges and solutions in South Africa could be viewed from a regional lense rather than the narrow local viewpoint. The paper will thus demonstrate the importance of the reorientation of the developmental planning system in order to mitigate its limitations that are engrained on official jurisdictions. Such a configuration warrants economic regional planning and innovation.

Why the city region approach?

The need to critically appraise the potential for the development of city regions cannot be overemphasised. All spheres of government - national, provincial and municipal - have a crucial role in advancing home-grown investment, boosting home-grown branding, investing in shared infrastructure, and offering business support. Notwithstanding this need for collaborative and coordination endeavours amongst all spheres of government aimed at strengthening inter-sectoral planning, allocative power remains squarely in place within sectoral line departments, at the national and provincial levels.

There is a strong policy support for city regions in South Africa. National and provincial policies endorse city region coordination and institutionalisation. Whereas a wide range of crucial national policies give expression to the city region concept of a GCR, two important policies, the NDP and the integrated urban development framework, give effect to planning and coordination across regions.

The NDP is a blueprint that represents a roadmap for South Africa to 2030. It identifies city regions and the role that they play as dominant urban agglomerations while acknowledging the restrictions of the planning system particularly as it relates to municipal and provincial boundaries since most developmental issues transcend administrative boundaries. The NDP thus advocates for an integrated planning system underpinned by a city regional perspective. In recognising that decision making around land-use management and the coordination of development endeavours are greatly hampered by the blurring of boundaries, the NDP calls for institutional structures that ensure greater collaboration and harmonisation of development plans and a system of governance for city regions (NPC, 2012).

The IUDF is a policy framework aimed at reconfiguring the South African urban system in response to the urbanisation trends. It also recognises that urban development transcends existing administrative boundaries. It advocates for institutional models or governance structures for developing and managing sustainable city regions that can plan and deliver services more efficiently by exploiting economies of scale and reducing externalities. It also endorses integrated and collaborative intergovernmental planning for the cost-effective investment of public resources within city regions (COGTA, 2016).

Notwithstanding this enabling policy support and international appeal, South Africa has barely experimented with the establishment of city regions. The only genuine example is the Gauteng Global City region and to a certain extent the Cape Town Functional Region. This development, although limited, points to a different model of urban governance and development planning at the sub national level in South Africa. It demonstrates an emergent awareness amongst policy-makers in South Africa of the importance of relational economic and urbanisation forces shaping the destiny of cities.

In South Africa, political sub national boundaries are the main source of territorial disputes that practically preclude pursuing of common developmental goals and interests resulting in an unintended bias in development. Since sub national governments, particularly at the local level, are hesitant to commonly exploit opportunities bestriding their borders, they are more inclined to pursuing narrow development initiatives far from their borders. In most instances the developmental initiatives are concentrated on metros and cities (Atkinson, 2010). This means that marginal areas along the borders become developmentally isolated and neutralised. This prohibits new development initiatives, which have to be undertaken on a regional basis. There is a need therefore, to explore the potential and prospects for the development of city regions in South Africa.

Objectives of the study

The research set out to achieve the following key objectives:

1. To analyse the institutional architecture, constraints and opportunities, and consider critical challenges for city regional development in South Africa.
2. To examine prospects for city regional development in South Africa and how it can be incentivised.

Literature review

The literature review of city regional development falls into three broad thematic areas:

- First, some scholars contend that city regionalism is an extension of a polycentric community structure. In other words, it is a form of evolution that presents challenges for regional constructions of economic governance in tackling inclusive economic efficiency matters.
- Second, another school of thought postulates that the intensification of city regions internationally indicates both expiration of an individual country and the international organisation of regional states as well as the measured substitution of territorial competition between countries by rivalries between cities.
- Third, to other researchers, city regionalism signifies a pivotal milestone with regards to regional restructuring and resizing of the province, translating into a new economic and social arrangement (Brenner, 2013).

City regionalism in a polycentric state

The convergence of academic attention on city regions by way of different spatial constructions of capital amassing together with the practices determining their political construction commenced in the 1990s. The attention was largely triggered by research on the different economic topography that contended that the different businesses spearheading the international economy gravitated towards agglomeration or clustering in big city regions (Porter, 2001). This solidified the concentration of most researchers on city regions premised on groupings of businesses in strategic developing sectors such as finance and technology. The demarcating of city regions was not founded on home-grown jurisdictional constructions of the state at the time but rather on organisations, guiding measures, and governance structures supportive of the commercial growth of business conglomerations in addition their neighbouring city clusters (Scott, 1998; Storper, 1997). It was therefore almost inevitable that the initial examination of city regional markets and organisations were isolated from the understanding of government structures and regional political affairs.

The continuing research into city regional economies frequently accentuates the significance of extensive urban agglomerations as contextualised within the multifaceted local political jurisdictions. Applying distinct political jurisdiction lenses, these extremely polycentric city regions are perceived to be facing various challenges relating to public service delivery as well as regional administration (Scott, 2012). Nevertheless, in contrast to independent municipal areas, the current global city regions are considered adequately innovative for intuitive institutional solutions. Nevertheless, most researchers are still fixated with economic

competence and attractiveness at the cost of understanding government constructions as well as political interests. This lends credibility to the assertion that the hand of the state is imperceptible from conventional economic analysis of city regions (Storper, 2013). As a result, economic and political rewards of city regional cooperation are only accredited in public policy because of presumptuous prior knowledge of territorial politics. In line with this postulation, the relevance of the state in this public policy discourse is relevant in as far as it highlights variances in nationwide political beliefs and bodies.

Notwithstanding these sensitivities to discrepancies in state policy contexts, government regional interests and geopolitical processes are not part of conventional policy and planning research on city regionalism. Research is still focused on big city regional clusters where home-grown political and economic policy makers skirt around assumed challenges in state economic organisation and state communal delivery (Neuman & Hull, 2011; Kantor *et al*, 2012). The polycentricity of the government is, therefore, envisaged as part of the policy setting and not as a dependent variable. This also holds true for the literature on urban economics in as far as it relates to cluster as well as the associated economic performance of city regions. In most instances, urban economists overlook city regions as numerical places that are isolated from broader public spaces (Glaeser and Resseger, 2010).

In the final analysis, no consensus is found in the literature on the part that the state should play in engineering, directing, and supporting city regional policy and administrative procedures (Jessop, 1998). Consequently, the different economic topography of city regions is narrowly understood as high-tech and structural realms that create regions (Storper, 1997).

The emergence of city regions and the new geopolitical order

The additional vital theme relates to the manner the research explains the connection amongst city regionalism and government regional establishment in the context of the urbanisation processes. The concept of provincial development is concerned with the way in which principal amassing is formed about mega-urban clusters, whose increasing political impact imperils the independence of the government (Soja, 2011).

Urban development is neither defined by the local need of industry nor the fluctuating expenses of conveying merchandises and persons. However, the process of regional urbanisation is centrally concerned with mega-urban agglomerations encompassing multiple employment nodes, unified regionally by bigger workforce markets or infrastructure, and knowledge networks, data, and capital (Castells, 2000).

These city region linkages as well as their associate industrialised clusters signify substantial risk to regressive prototypes of economic growth premised on the artificial hypothesis that cities function in somewhat independent countrywide city systems (Florida, 2008). The reality is that counties have superseded cities by means of actual engines of the worldwide economy (Jacobs, 1984). The different regional city region is so widespread that most researchers are envisaging the prospect of a superficial geopolitical change in the global organisation from

independent regional states to city linkages (Taylor, 2011). This intensely geopolitical outlook of the modern city situation has been extensively acknowledged as well as executed in policy-making amongst various nationwide settings. Most governments are linking the state with the new big city establishments that surpass political borders. These spatial establishments are regional indicators that are defining formations that are increasingly guiding policy-making and planning (Harrison and Hoyler, 2015). As the city region notion becomes integrated in the provision of services, it is consequently being attuned to the wider policy agenda.

The emergence of big city regions with the capability to displace the wider state system is a plausible debate, nonetheless, it disregards the geopolitical importance of the nationwide and international supervisory topologies behind these new big city region regional establishments. It does not acknowledge that political boundaries and the city regions are traditionally dependent on political and communal constructs, whose development is intertwined with historical tussles about communal imperative and capital amassing. The presence of a powerful municipal core in a nationwide region implies the intensification of fresh arrangements of regional politics centred on regionalism (Poulantzas, 1998). Given the persistence effectiveness of such regional politics, any assertion that the emergence of global city regions automatically weakens the state warrants careful examination because other likelihoods cannot be dismissed.

City regionalism and the resizing of the state

The third and final theme is largely premised on “state rescaling” literature (Brenner, 2009). It postulates that the emergence of city regionalism is intertwined with the spatial prescriptions and crisis prone capitalist mode of production. Therefore, according to this school of thought, the political structure of the city region as a different state space is more reflective of bigger-size political-economic logics and contradictions than economic inadequacies operating within city regions (Brenner, 2004). Commencing from this viewpoint, endeavours to reinforce the attractiveness of city regions represent a tussle for the political and economic regulator of capitalism at a different spatial balance transcending territorial precincts of a metropolitan area (Wachsmuth, 2015).

Premised on this perception, city regionalism is entwined with a spatial fix or a specific system of accrual anchored on state and governance procedures functioning around city regions (Harvey, 1982; Jessop, 2000). This city regional obsession is grounded on political attractiveness which validates particular means of being rational and realistic about economic growth, and relegates others. Thus “spatial fix” enables the deferment and replacement of inconsistencies, crisis-tendencies, and conflicts to the advantage of those fully included in political attractiveness at the cost of those who are excluded from it (Jessop, 2008). It is reflective of enduring communal procedures as well as authority relationships sustaining the regional organisation of the state. Therefore, it becomes important to distinguish the various means through which city regionalism converts into the contradictory state strategies linked to geopolitics of capitalism (Harvey, 1985).

The intensification of city regionalism is frequently presented as proof of the reversal of government power together with the elevation of communal supervisory establishments aligned with the international regional extent of entrepreneurial businesses and establishments. In reality though, city regionalism is not concerned about trimming of government power since the state is self-reliant in dealing with both its endogenous and exogenous territorial scope. At times this is in reaction to local social and political attractiveness; it is therefore crucial to examine how growth coalition would gain or lose from the different state territorial arrangements around metropolitan areas (Cox, 2011).

In some instances, city regionalism is central to the internationalisation of the state itself such that many of the endeavours to create global cities around the world are subjected to the procedures of government spatial reorganisation (Kangas, 2013). This means that big city clusters are recognised more as city regions to enter global spheres inside particular sections of people, groups of capital, and economically influential thoughts are implicitly disseminated. Instead of compromising the national state, the political arrangement of city regionalism on an international stage can actually expose a lot about how the state aims to reconfigure its territorial construction to entice global investment and safeguard economic development (Jonas, 2013).

In sum, each of the thematic areas of this literature review presents valuable understanding of how to conceptualise city regionalism in relation to the state. Each theme addresses the role of geopolitics in shaping city regionalism and development.

Defining a city region

The literature has no universal definition of a city region (Parr, 2005). While the concept features prominently in the literature, it is frequently used without any specific definition, resulting in it being intermixed with other analogous terms, such as world cities (Hall, 2001; Scott, 2001a); global cities (Sassen, 2001; Scott 2001a); functional urban regions (Cheshire, 1990); regional economies (Storper, 1995); and region states (Ohmae, 1995). The ramifications of this ambiguous but prevalent usage are that the concept of a “city region” ends up defining individual or a combination of territorial units at the sub national level.

The city region meaning therefore fluctuates extensively and encompasses a multitude of diverse factors. The least shared feature of almost all definitions of a city region is the presence of a core city linked by functional ties to a vicinity. The landscape of those ties may differ from one definition to another, but commonly comprises a mixture of economic, housing market, travel-to-work, marketing, or retail catchment factors. However, even the mixture of an urban core and a semi-urban and rural neighbourhood as the heart of a city region is frequently in dispute. The urban core, for instance, is at times substituted by several cores, thus transforming the city region into a polycentric geographical unit (Scott *et al*, 2001, p. 11; Faludi, 2002; Parr, 2003).

The meaning of a city region is further complicated by the fact that the neighbourhood itself could also be narrowly defined and geographically limited, or overlap with that of other city regions (Davoudi, 2003). Moreover, parameters of a city region do not essentially match administrative boundaries. In some instances, a city region may be completely incorporated within the boundaries of an existing administrative unit, whereas, in most instances, it will transcend administrative partitions (Bennett, 1997).

Crucially, the parameters of a city region are usually not stationary in time and are altered by the transformations in the functional interconnections that link the core city to its neighbourhood (Scott, 2001b, p. 820; Ache, 2000). The indistinctness in the definition of a city region could cast doubts on the validity of the concept. It could be argued, for instance, that if neither the parameters of the city region are easily defined, nor who determines the process of institutional reconfiguration or at what spatial magnitude should interest groups be mobilised, then the idea of the city region is fictional (Jonas & Ward, 2002).

The concept of a city region is thus defined by a series of assertions.

- First, territories of city regions are not just simple locations, but entities that are linked together by common interests, which means that governance issues become important as well as how they will be addressed by voluntary common institutions (Newman, 2000; Frisken & Norris, 2001; Hauswirth *et al*, 2003; Leibovitz, 2003).
- Second, the city region is perceived as the economic engine of the global economy because the wellbeing and wealth of large territories is dependent on the success of its core and neighbouring city regions (Hall, 1998; MacLeod, 1999; Scott, 2001b; Scott *et al*, 2001; Scott & Storper, 2003).
- Third, the city region framework is regarded as the perfect model for policy intervention in a globalized world (Ohmae, 1995, 2001; Keating, 1998; Tomaney & Ward, 2000; MacLeod, 2001; Scott *et al*, 2001). This viewpoint enables us to conclude that city regions make sense as economic units (Jacobs, 1984). Although all these beliefs are contentious, they have helped intertwine an extensive but somewhat incongruent literature on the city region phenomenon.

Methodology and approach

This research is premised on the supposition that whereas city regions are becoming a developmental conduit internationally, they are not fully established in South Africa. This paradoxical stance lends itself to three research questions for this this paper:

- Why is the city regions development pathway not institutionalised in South Africa?
- What are the constraints and challenges?
- How can their establishment be incentivised?

The case study methodology was applied to this research to answer these questions. International case studies are supplemented with secondary quantitative and qualitative data analyses, as well as content analysis of policy documents. The four international case studies comprised:

- Bangkok metropolitan region in Thailand;
- São Paulo metropolitan region in Brazil;
- Metropolitan region of Barcelona in Spain; and
- Mexico City metropolitan area in Mexico.

The case studies were selected on the basis of three criteria:

- Their representation of different geographic regions of the world;
- The presence and diversity of specific key drivers necessary for the functioning of a city region; and
- Their ability to provide better insights in the challenges city regions are facing.

The case studies serve three objectives:

- They are meant to identify the main challenges associated with the transition of cities to city regions, and to explore innovative and new perspectives on solving urban problems arising from a regional perspective rather than a local perspective;
- To learn what can be done to enable potentialities of a city regions to materialise; and

The Gauteng City-Region was used as a case study for South Africa. A different approach was adopted. Secondary data was collected and analysed and supplemented with primary data which was collected through the interviews for empirical evidence. Interviews were conducted with senior officials from the Gauteng City-Region Observatory.

International case studies

This section discusses the six international case studies mentioned above.

Bangkok metropolitan region

Bangkok is a regionally important coastal city, situated in the flat deltaic plain of Chao Phraya River basin adjacent to the Gulf of Thailand. It has developed into a centre of numerous activities which have a supply chain and a connection with the neighbouring provinces known as Bangkok metropolitan region (BMR) straddling five provinces: Samutprakarn, Patumthani, Samutsakorn, Nakhonpatom and Nonthaburi. The BMR encompasses a total area of 7 761 square kilometres. It has a population of 14.5 million and a combined output of \$149.39 billion, translating to 44.2 percent of Thailand's GDP (Roberts *et al*, 2017).

Thailand has three levels of government: central, provincial, and local. There are various categories of LG, and Bangkok falls under the Special Local Administrations (SLA) category, comprising only the Bangkok Metropolitan Administration (BMA) and the city of Pattaya. This means that the BMA has the same administrative ranking as a province. Whereas national government is the ultimate decision maker, BMA has autonomous authority in some key policy areas, mainly in land use, environment management, transport, water and solid waste management. Strategically important regional projects within the BMA are approved by the ministerial cabinet whereas the BMA council approves the rest of the projects in BMA in

alignment with the Bangkok metropolitan regional plan. The plan is put together by the National Economic and Social Development Board (NESDB) which is tasked with economic and social development and the Ministry of Interior and the Department of Public Works and Town and Country Planning (DPWTCP) which is responsible for spatial planning of BMA (Dhakal & Shrestha, 2016).

At the district level, there is an independent administration with a representative in the BMA council. The district crafts the regional plan and the BMA representative brings the plan into the BMA council where it is appraised in alignment with the regional plan before approval. If the DPWTCP initiates a project, for instance, a railway line connecting Bangkok with other countries, then cabinet approval is required. The BMA is part of the cabinet. At the national level the rail line will be designed. In Bangkok, the planning of infrastructure and town planning takes place in a single department³².

There are three layers of metropolitan governance in Bangkok. In the first layer, the core city of Bangkok, there is a BMA; in the second layer ring is the BMR and outside it is an expanding third layer, the Extended Bangkok Region (EBMR). The two outer layers are made up of a number of provinces and hundreds of LGs. Many of the most important individual functions, in all three layers, are carried out by state enterprises, national governments, and local authorities. Alternatively, many functions in the fields of health, education, and infrastructure provision are carried out under contract by private service agencies (Webster, 2004).

The functional area of Bangkok has therefore expanded beyond the city of Bangkok into the BMR and EBMR. However, no institutional mechanism for strategic planning is in place in the BMR. The BMR is composed of the BMA, which administers the city of Bangkok, and the other five provinces, all of which are autonomous urban authorities with their own planning, legislative and executive branches.

Various studies have highlighted the weaknesses of the institutions in the BMR and EBMR including the BMA. (Grit, 1999; Rimmer, 1995; Saowalak, 1999; Webster, 2000). Whereas Bangkok is the capital of Thailand, the metropolitan government, BMA, has relatively little institutional or financial power to shape the destiny of the metropolis. There are a wide variety of state agencies responsible for key public services in the BMA, the BMR and EBMR. Bangkok (BMA) controls less than 10 per cent of public facility/infrastructure investment within its territory. Most investment of this kind is undertaken by state enterprises, and to a lesser extent, by the national government. Of all the key public services in the BMA, the BMA is directly and solely responsible only for refuse collection and parks and recreation (Webster, 2000).

In general, the Thailand public sector (government and state enterprise) institutions enjoy considerable autonomy, with no oversight institution effectively able to coordinate those activities that affect urban form and function. Within the organisation, there is often good

³² *Ibid*

vertical coordination but horizontal coordination is usually poor. Thus, individual organisations have sectoral plans for activities in the urban region, sometimes well prepared but almost invariably uncoordinated with the plans of other organisations (Kaothien and Webster, 2000).

Horizontal cooperation between the BMA and the five provinces has only been possible for some large scale projects such as the mass transit development, however, beyond these few exceptions, metropolitan cooperation has been weak. The MBA has no authority to take unilateral action with the five surrounding provinces. LGs cannot use their budgets to fund projects that extend beyond their administrative borders, and there is no legal provision or ministerial guidelines that indicate how LGs can establish intra-regional cooperation (Ratanawarah, 2010). Moreover, significant cooperation initiatives between the city of Bangkok and the other five provinces must first be approved by the national government. This lack of metropolitan cooperation compromises the functionality of the BMR. Bangkok's rapid expansion has also left gaps between its functionally integrated economic area and administrative boundaries, highlighting the need for horizontal cooperation between local jurisdictions in the MBR (OECD, 2015). In the BMR, there is no legal framework that make adjustment possible to expand boundaries and area wide jurisdictions, or that allow the incorporation of municipalities of other provinces. There are also no incentives to encourage cooperation and collaboration. The institutional framework warranted to support the collaboration and coordination of activities to make the BMR is also weak.

In sum, the successes of horizontal collaboration efforts in the BMA were evident in the successful conceptualisation and implementation of the mass transit system project. The impact of this project succeeded in alleviating traffic congestion and air pollution in the BMA. However, the BMA continues to face the challenging task of coordinating municipal activities as the city of Bangkok is growing beyond its administrative limits without adequate backbone support from horizontal institutions and legislation for intra-regional cooperation. This compromises the functionality of the BMR is compromised.

São Paulo metropolitan region

São Paulo is the largest city in Brazil with a population of 11.2 million people. It is the largest city in the southern hemisphere, and the seventh largest city in the world by population. The city is anchored to the São Paulo metropolitan region (SPMR). The SPMR, including the city of Sao Paulo, is located in Sao Paulo state in south eastern Brazil. The city of Sao Paulo is the state capital. The SPMR is the largest and most complex urban region in Brazil. Its population is 20 million making it one of the five largest metropolitan areas in the world (Olinto 2011). There are 172 municipalities in SPMR, which extends over a 200-kilometre radius of the city of Sao Paulo. The SPMR accounts for 80 per cent of the GDP of the state of Sao Paulo and over 30 per cent of Brazil. The core city of Sao Paulo is the financial and business heart of the region (Harrison *et al*, 2018).

According to the 1988 national constitution, Brazil is a federation of states, one federal district (Brasília), and municipalities. The independence of municipalities is protected by the

constitution, granting them legislative and executive powers. Municipal powers encompass urban planning, land regulation, primary education, and basic services such as health and solid waste. However, some powers are held concurrently with state governments, such as urban transportation and water and sewage. Municipalities receive funding from property taxes, services charges and transfers from federal and state government, states raise funding through value added taxation. The constitution also makes provision for the creation of metropolitan regions, which have structures of cooperation between the municipalities. There are currently 66 metropolitan regions across the country³³.

The SPMR was created in 1973. In 2011, the government of São Paulo promulgated legislation that effectively reconfigured the institutional set up of the SPMR. Consequently, a variety of structures were created in addition to those that existed previously. They encompassed:

- A development council for the metropolitan region;
- A consultative council, to elicit and present to the development council the proposals and views of civil society;
- The legislative branch at both the state and municipal levels;
- The executive side of the state and municipal level;
- Technical groups to pursue specific issues of interest to the SPMR;
- A regional enterprise linked to the secretariat of metropolitan development to organise, integrate, plan, and execute functions of common public interest to the SPMR, such as the regional transport network, housing and sanitation, environmental issues, and a regional development fund (Wetzel, 2013).

These new structures were aimed at strengthening collaboration across the region and establishing forums to discuss common interest among the state and the SPMR municipalities. Over the years, more similar structures have been formed to improve coordination and development across the SPMR. However, limited funding and rigid decision making authority entrenched in the constitution have relegated them to an advisory role. Consequently, meaningful and successful collaboration has been limited to integrated transport projects. This means that the SPMR will continue to face many challenges emanating from a growing population and economic transition³⁴.

The functionality of the SPMR is first and foremost being challenged by the lack of effective mechanisms for coordination across the region. As stated earlier, metropolitan areas are created at the state level, but each municipality has sovereignty and veto power over plans and programmes to be implemented in its jurisdiction. This compromises the creation of effective mechanisms for coordination to ensure a balanced view between the states and municipalities.

The central challenge is bringing together numerous entities, with one much larger than the others, to make joint decisions and implement programmes. The newly developed structures such as the development council, the consultative council, the technical groups, and the

³³ *Ibid*

³⁴ *Ibid*

regional enterprise to support implementation of plans, allow for representation of all municipalities in the SPMR and have the potential to play a more effective and concrete role than previous structures in strengthening the collaboration that is required. However, the tension between the state and municipalities over who has ultimate decision making authority and use of resources continues to undermine these structures.

Effectively building investment priorities into the budget is another secondary challenge. The municipalities of the SPMR do have at their disposal the tools to raise revenues, as well as significant transfers from higher levels of government. However, given its size, São Paulo city is clearly the driver of the fiscal balances for the region as a whole.

The economic and demographic changes in the SPMR mean that pressures for both social services and investment needs are expected to increase. Many plans, programmes, and strategies anticipate and attempt to address these needs, however, the challenge is which plan takes precedence and how are they are linked to the actual resources available. The budget legislation, as well as budget process appears to treat critical investment spending as a residual, subject to fluctuations in revenue collection. This kind of uncertainty over the magnitude of resources available for investment further compromises collaboration across municipalities, thereby placing a premium on meeting the enormous investment needs of the SPMR.

São Paulo city has come up with innovative mechanisms to finance investment and urban renewal through urban operations and the issuance of bonds for enhanced development rights in specified areas. While these are useful, they are difficult to use for cross-jurisdictional purposes. A key priority for the metro region is to build investment priorities into the budget more effectively at all levels. Without this, it will be extremely difficult to undertake the investments necessary to economically, socially, and environmentally renew the SPMR so that it maintains its place on the global stage³⁵.

In sum, the SPMR is backed by the constitution which makes provision for the creation of metropolitan regions and structures of cooperation between the municipalities. This means that collaboration endeavours and the supporting institutional structures are legalised and therefore enabling the functionality of the SPMR. The institutional framework, in particular, has a huge potential to strengthen the collaboration warranted in making the SPMR functional. Successes in integrated transport projects attest to this. The incentives for regional coordination and collaboration in the SPMR have been through enabling constitutional and legal frameworks. However, funding availability and certainty, immutable decision making, the lack of coherent mechanisms for coordination, and sequencing and prioritisation of infrastructure investments compromise the functionality of the SPMR.

Metropolitan region of Barcelona

Barcelona is the second largest city in Spain and the capital of Catalonia. It has a population of 1.6 million people, while its functional urban area has 4.9 million people. The city forms the

³⁵ *Ibid*

core of the Barcelona-Lyon mega-region (Trullen, 2015). The two administrative definitions used locally are the metropolitan area of Barcelona (AMB) and the metropolitan region of Barcelona (RMB). The RMB consist of 164 municipalities, has 5 million inhabitants and covers 3.235 million square kilometres. It is formed by the AMB and 128 other neighbouring municipalities (Harding *et al*, 2010).

Metropolitan governance in Barcelona is intricate. On the one hand, Barcelona is the capital city of Catalonia, one of the 17 decentralised and autonomous regions of Spain, and on the other, it is part of a highly fragmented local system. Catalonia has 947 municipalities and a population of 7.5 million, with 50 percent of it concentrated in the metropolitan area of Barcelona. This means it is an unbalanced territory in terms of both urban and population density. The median Catalan municipality has less than 1 000 inhabitants. However, 36 municipalities integrate the 3.5 million metropolitan citizens within a highly populated and densely urbanised metropolitan area, with a number of medium-sized to small-sized cities surrounding Barcelona (Vallbé *et al* 2015).

Notwithstanding the multi-tier structure of government coupled with a high level of municipal fragmentation, both levels of government are institutionally and politically pertinent (Agranoff, 2010). Institutionally, both regional and municipal tiers of government are sound. Catalonia has sufficient legislative and executive powers in various areas encompassing housing, urban and regional planning, agriculture, transportation, health, education, social welfare, language, and culture (Aja & Colino, 2014). Municipalities also directly elect legislatures, which in turn elect the mayor, but they have weak fiscal autonomy.

The establishment of the AMB could be viewed as an exception in the Spanish context. In formal legal terms, a metropolitan area in Spain is an organisational arrangement that could be formed by an autonomous community when the coordination of action among some linked municipalities is warranted. Each regional government is entrusted to make a call on the existence of such linkages and whether they warrant institutionalisation and formal arrangements among the affected municipalities. However, few regional governments have exercised this privilege. When they have done so in exceptional instances, such as in Barcelona and Valencia, it has been for very limited purposes. There are no incentives to stimulate and inspire the consolidation of metropolitan areas as organisational arrangements to deal with complex urban issues (Vallbé *et al* 2015).

There has been no consistent data on links between municipalities based on mobility in Spain until recently. Notwithstanding these data improvements, there are still no accurate boundaries for almost 25 metropolitan areas. Consequently, there is no official definition and a clear distinction between urban and metropolitan areas. Therefore, three definitions of the urban region have been adopted in Barcelona: city region, metropolitan region, and metropolitan area. Each one denotes a different territory and implies the operation of different institutions³⁶.

³⁶ *Ibid*

At the city region level, there is a composite institutional metropolitan institutions: the metropolitan transport authority, the metropolitan transport entity, the metropolitan environment entity, the mancomunitat of municipalities and the consortium of municipalities. For each institution, the population and number of municipalities is identified, together with their powers, their financial resources and their political representation. In addition to these public institutions, there are also public and public-private agencies that operate in the city region for the management of metropolitan services such as water supply, drainage and sewerage, as well as treatment and utilization of waste. There are also several informal networks between municipalities, such as strategic plans, mobility plans and pacts to promote economic development. All these informal arrangements have indirect political representation and are financed by their own members. They deal mainly with issues regarding economic development³⁷.

In essence, Barcelona has regional and municipal tiers of government that are institutionally sound. Moreover, the latest metropolitan legislation passed in Barcelona has a great potential to transform the RMB into a highly dynamic metropolitan region. However, it is not the panacea to all the RMB metropolitan challenges. The RMB is still searching for the best ways to improve the functioning of the region, both by enhancing the functional strengths of the present metropolitan governance structure and eventually by expanding the territory of metropolitan collaboration. There RMB relies heavily on voluntary action in enabling cooperation and collaboration of activities without any explicit constitutional or legal framework. There are also no recognisable incentives to encourage cooperation and collaboration.

Mexico City Metropolitan Area

The Mexico City metropolitan area (MCMA) is one of the largest urban agglomerations in the world. Located in a closed basin of 9 600 square kilometres, it spreads over a surface of 4 250 square kilometres at 2 240 meters above sea level. The MCMA has a metropolitan population of 21.2 million. It concentrates 18 per cent of the national population and generates 35 per cent of Mexico's GDP on a surface equivalent to less than 0.3 per cent of the national territory. The MCMA comprises the 16 boroughs of Mexico City and 34 municipalities of the state of Mexico for a total of 50 geopolitical and administrative units that must coordinate among themselves in terms of urban planning, public services provision, and overall city management (Baker, 2012).

The MCMA has been expanding continuously since the 1930s both physically and demographically. The rate of growth of these two dimensions, however, has been divergent. Physical and demographic growth reached its peak in the 1960s, and until the 1990s the physical expansion (urban sprawl) formed a continuous urbanised area with gross population density decreasing over time, and spatially increasing with distance from the historical city centre. Since 1990 growth has been marred by a leapfrog expansion and urban spatial continuity was broken. Present land-use shows limited contiguity to previously urbanised

³⁷ *Ibid*

areas. For instance, in 2000, the neighbouring municipalities located in the state of Mexico represented 52 percent of the population and grew at an annual rate of 2.4 per cent on average, while the 16 boroughs of Mexico City had a population growth rate of 0.3 per cent annually³⁸.

Metropolitan areas in Mexico do not have legal status as official jurisdictions, but the constitution allows inter-municipal cooperation on a voluntary basis. Several governments operate on different levels, leading to the evolution of different and frequently clashing policies and rules. The administrative powers of 60 municipalities overlap with the government of Mexico City, which in turn interacts with the powers of two different states, Mexico and Hidalgo, as well as with the power of the central government (Nieto *et al*, 2018).

Legal planning, coordination and political structures in Mexico have not been conducive to metropolitan-scale organisation. Efforts aimed at building effective metropolitan agreements and commissions have been unsuccessful because of the lack of financial, regulatory and decision-making authority (Cenizal 2015). Hence MCMA entails a complex set of governmental entities with overlapping federal, state, and local powers and an intricate organisational structure that complicates regional metropolitan governance arrangements, in particular, regional planning schemes seeking to deliver services efficiently (Perlman *et al*, 2011).

The laws in Mexico are quite restrictive in relation to the creation of new structures at the metropolitan level, and formal cooperation is thus difficult to achieve. Municipal leaders within a region may represent different political parties which complicates the desire or intention to collaborate, as this has not been common practice. As a result of the legal restrictions governing Mexican metropolitan regions, cooperation around service delivery is one of the most common ways of managing a metropolitan issue, even if it does not involve all municipalities in the region.

Cooperation is a learning process, and builds social capital. Clear articulation of incentives to cooperate for metropolitan governance is vital to maximise benefits and mitigate costs of cooperation. However, there are also no incentives to encourage cooperation and collaboration in the MCMA. This means that there are no arrangements to stimulate cooperation and reinforce interdependence and support coordination of decision making amongst interrelated sectors in the MCMA.

Summary findings of the international case studies

The findings emanating from the international case studies offer a wide range of success factors that can make city regions more functional. However, there are also institutional architecture lessons to be considered for city regional development in South Africa. The case studies also provide common critical challenges that must be adequately addressed in order to make city regions functional in South Africa.

³⁸ *Ibid*

In the majority of the case studies, there are successes that are worth consideration in making city regions more functional. In Thailand, the successes of horizontal collaboration resulted in the successful delivery of the mass transit system in the BMR. In Brazil, legislation and supporting institutions are already in place and supporting the SPMR. Consequently, successes in the integrated transport projects were realised. In Spain, regional and municipal structures are institutionally sound and the latest reforms in metropolitan legislation have great potential to transform the RMB into a highly dynamic metropolitan region. In South Africa, the GCR has already accomplished great success in intergovernmental collaboration resulting in the successful delivery of various regional projects such as new regional wastewater facilities and the development of the Gautrain rapid rail link project.

The case studies also highlighted institutional challenges undermining the functionality of city regions. In Thailand, the case study on BMR demonstrated how the gaps between its functionally integrated economic area and administrative boundaries are undermining horizontal cooperation between local jurisdictions in the region. In Brazil, the case study on São Paulo metropolitan region showed that the functionality of the region is challenged by the lack of effective mechanisms for coordination across the region. There is also no prioritisation of developmental plans and proper linkage to available resources thus further compromise collaboration across municipalities. Most importantly, structures aimed at improving coordination and development across the region are severely constrained by limited funding and rigid decision making authority entrenched in the constitution.

In Spain, the case study on the metropolitan region of Barcelona revealed that a highly institutionalised model of metropolitan governance is not supportive of a unified actor for the region. It also highlighted the ongoing struggles to find best ways to improve the functioning of the region, both by enhancing the functional strengths of the present metropolitan governance structure and eventually by expanding the territory of metropolitan collaboration. In Mexico, the case study on the Mexico City metropolitan area brought to bear the unsuitability of legal planning, coordination and political structures to metropolitan-scale organisation.

The Gauteng City-Region

Background of the GCR

The Gauteng City-Region (GCR) is one of the fastest growing city regions in South Africa. The functional city region is largely coterminous with the administrative borders of Gauteng but also stretches beyond the official parameters of the province. It links cities, towns and urban nodes that are interconnected even though some of them are located in neighbouring provinces. The main GCR is an integrated cluster of cities, towns and urban nodes that together make up the economic heartland of South Africa.

The urban profile of Gauteng is dominated by three integrated single-tier metropolitan municipalities: Ekurhuleni, Johannesburg and Tshwane. These metropolitan municipalities

have exclusive executive and legislative authority in their jurisdictions. The rest of Gauteng province consist of two-tier LG arrangements corresponding to nine municipalities of diverse population size. The West Rand, Sedibeng and Metsweding are district municipalities with municipal executive and legislative powers in a jurisdiction encompassing more than one municipality. Districts and locals share municipal executive and legislative authority subject to the capacity of each tier to perform functions optimally. The local municipalities in Gauteng are Mogale City, Merafong, Randfontein³⁹, Westonaria⁴⁰, Emfuleni, Lesedi, Midvaal, Kungwini⁴¹ and Nokeng tsa Taemane⁴² (Gauteng City-Region Observatory, 2010).

Evolution of the GCR

The GCR is a brainchild of the Gauteng provincial government (GPG). Its conceptualisation in the early 2000s appears to have been along the parameters of a province as opposed to a municipality, or even a hybrid of the former and the latter. The interviews clarified though that the conceptualisation of the GCR was not premised on the lack of intergovernmental functions and institutions for its governance *per se* but rather on the realisation that they are divided between a generic provincial structure and generic municipal structures that are largely defined by their own bureaucracy. In this context, whereas the rationale for the division of functions is clearly well founded, so is that of coherence, collaboration and coordination. In 2006, the GCR Perspective report effectively established the GCR as a standalone concept that is somewhat distinct from the Gauteng province. It set an agenda that continues to inform the GPG policy and thinking around the GCR while introducing lingering ambiguities that have continued to punctuate its evolution. There is lack of clarity, for instance, on the relationship between the envisioned city region institutions and those of the GPG. This also came up strongly in the interviews as detailed in the section on the summary of interviews below. The successive GPG administrations embraced the city region concept. This culminated in the introduction of the transformation, modernisation and re-industrialisation (TMR) as a development plan for the GCR in 2014.

Opportunities for the GCR

The GPG has taken full advantage of ample opportunities to make the GCR more functional. Specifically, the GPG has used the opportunities presented by the existing national and provincial policies as well as institutions to support coordination and collaboration between different spheres of government in the GPG thus improving the functioning of the GCR. The various policies and institutional arrangements and the extent to which they support the function of the GCR are outlined below.

³⁹ Randfontein Local Municipality was a local municipality in West Rand District Municipality, Gauteng, in South Africa. After municipal elections on 3 August 2016 it was merged into the larger Rand West City Local Municipality.

⁴⁰ Westonaria Local Municipality was disestablished and merged with Randfontein Local Municipality to establish Rand West City Local Municipality on 3 August 2016.

⁴¹ Kungwini, along with the Metsweding District, was disestablished and absorbed into the Tshwane Metropolitan Municipality on 18 May 2011, the date of the 2011 municipal election

⁴² Nokeng tsa Taemane, along with the Metsweding District, was disestablished and absorbed into the Tshwane Metropolitan Municipality on 18 May 2011, the date of the 2011 municipal election

Policy supporting environment for the GCR

The GCR does not operate in a policy vacuum but it is premised on strong policy support. There are a number of provincial policies on which the GCR conducts activities as detailed below.

Transformation, modernisation and re-industrialisation (TMR)

The TMR is a wide-ranging policy that tackles economic development, industrialisation, infrastructure, spatial transformation, social development and improving governance and the public service in the Gauteng province (Gauteng Planning Division, 2015). It advocates for an integrated governance and the strengthening of institutions that support collaboration and coordination of planning activities in the Gauteng region. It is a vital policy for the GCR because it calls for the transformation of the current governance system to a city region-wide metropolitan system of governance.

Gauteng Spatial Development Framework (GSDF)

The GSDF is an important policy that defines a unified land development process aimed at aligning, coordinating and harmonising all development spending in the Gauteng province (Gauteng Provincial Government, 2016). It is an important policy for the GCR because it presents a strong basis for the harmonisation of development across the administrative boundaries of the Gauteng province.

The Gauteng Integrated Transport Master Plan (ITMP)

The 2013 ITMP is an inclusive policy aimed at delivering a sustainable transport system in Gauteng. It presents a planning framework for all spheres of government's three levels to deliver an integrated transport system over 25 years. It also authorises the Gauteng Department of Roads and Transport, in collaboration with other government spheres, to plan, regulate and develop an integrated and efficient transport system for the province. It is critical for the GCR because it proposed city-region wide transportation institutions, the Gauteng Transport Commission (GTC) and an independent Gauteng Transport Authority (GTA).

Gauteng integrated infrastructure master plan (GIIMP)

The GIIMP is a comprehensive policy aimed at coordinating infrastructure investment across the Gauteng province. It covers a wide range of infrastructure encompassing transport, energy, water, ICT, social and human settlements, tourism and green infrastructure. As an all-inclusive inter-sectoral plan, it provides a clear policy direction, ensure collaboration across government and with the private sector, and promote sustainability through the efficient use of resources (Gauteng Provincial Government, 2014).

Supporting institutional architecture for the GCR

A number of institutions have been put in place by the GPG to enhance the corroboration and coordination of planning in the GCR. It is worth noting that these institutions do not create an additional sphere of government in Gauteng as earlier stated. However, these institutions demonstrate how collaboration and coordination of planning activities can be achieved in the

GCR. The institutions falls broadly into two broad categories, intergovernmental relation institutions and innovative institutions. They are outlined briefly below.

Intergovernmental relations institutions supporting the GCR

The premier's coordinating forum (PCF)

The Intergovernmental Relations Framework Act (IGRFA) of 2005 established the PCF to advance and enhance intergovernmental relations between the province and LGs in a province. Its composition comprises the Premier, the Member of the Executive Council (MEC) for LG, any other MECs nominated by the Premier, the mayors of the district and metro municipalities, the administrator any of those municipalities if the municipality is subject to an intervention in terms of section 139 of the Constitution, and a municipal councillor nominated by organised LG in the province.

The PCF operates as a consultative forum whose decisions are not binding to neither the province nor the municipalities. This means that key determinant for the implementation of PCF decisions is heavily reliant on the robustness the relationship between the Premier and the mayors. The PCF is therefore important in ensuring the alignment of the timing of planning and resource allocation decisions in promoting the shared vision of the GCR.

District intergovernmental forum (DIF)

The IGRFA established the DIFs to advance and enhance intergovernmental relations between a district municipality and the local municipalities in a district. The DFI composition consist of the mayor of each district municipality, the mayors of the local municipalities in the district and the administrator any of those municipalities if the municipality is subject to an intervention in terms of section 139 of the Constitution. The DIF functions as a consultative forum for enhancing the collaboration and coordination of planning activities between the district and local municipalities. It plays a crucial role in ensuring horizontal coordination of municipal planning priorities and implementation in the GCR.

The extended executive council lekgotla

The extended executive council lekgotla is an annual forum for the approval of government provincial and municipal priorities and programmes. It also tracks progress on the intergovernmental programme of action for the province. Its composition comprises all provincial MECs and mayors of all municipalities in the province. The extended executive council lekgotla does not take executive decisions. This means that it does not have decision making authority because its resolutions are still subject to the approval of municipal councils and by provincial government structures. Its importance to the GCR lies in its ability to enhance planning and collaboration between the provincial and LG.

The service delivery war room

The service delivery war room (SDWR) is a political, coordination and oversight forum consisting of the premier, MECs, the mayors and ward councillors. It is aimed at advancing

more efficient and responsive integrated service delivery in the province. It pulls together various existing developmental policies into a province-wide comprehensive integrated service delivery network. It is important for the GCR because it ensures that provincial departments and municipalities act together using the powers and functions vested in them in legislation to respond to the needs of the citizens. It also assists in eradicating duplication and implementation of contradictory strategies and policies.

Innovative institutions supporting the GCR

The Gauteng infrastructure coordinating committee (GICC)

The Gauteng infrastructure coordinating committee (GICC) was established by the GPG to bolster intergovernmental relations between the provincial and LG infrastructure development sectors. It comprises the Premier, MECs for Finance, Roads and Transport, Economic Development, Infrastructure Development, Human Settlements and COGTA, and mayors of all the municipalities in Gauteng. It is supported by a technical committee. It is crucial for the GCR because it enhances the role of the province in coordinating infrastructure investments across provincial departments and between provincial and municipal governments.

Gauteng Infrastructure Financing Agency (GIFA)

GIFA falls under the Gauteng Provincial Treasury. It was established by the GPG to strengthen infrastructure development in Gauteng through alternative funding partnerships. GIFA is a fully technical structure with a wide range of stakeholders encompassing the Gauteng Provincial Treasury, GPG, LG, National Treasury, development funding institutions (DFIs) and private banks. It raises financial resources for infrastructure projects through the private sector and DFIs. It is important for the GCR because it coordinates alternative funding for infrastructure in the province.

Gauteng transport commission (GTC)

The GTC was established in 2013 to advance and enhance coordination, integration and alignment of planning within the transport sector. It comprises MEC for Roads and Transport and all Members of the Mayoral Committee (MMCs) for Transport. It is supported by a secretariat and a panel of experts that is appointed annually. Its importance lies in its recognition that the GCR is a contiguous transport area that seamlessly flows from one metro to another.

Gauteng Growth and Development Agency (GGDA)

The GGDA was established by the GPG to promote economic growth and competitiveness and position Gauteng as a globally competitive city region, through creating an enabling environment for implementing key economic development programmes in the GCR. It is the implementation arm of the Department of Economic Development and assists the department in leading, facilitating and managing sustainable job creation and inclusive economic growth and development in the GCR.

GCR Academy (GCRA)

The GCRA was established by the GPG to respond to the challenge of shortage and scarcity of critical skills to support an efficient and effective public service delivery in Gauteng.

GCR Observatory

The GCRO was established by the GPG to build the knowledge base that government, business, labour and civil society need to improve GCR performance. It is a research-driven institution that collects data and benchmarks the city region, provides policy analysis and support, and publishes critically reflective academic work.

Interview findings on challenges in the GCR

Policy challenges

There is clearly strong policy support for the GCR. However, in the interviews the issue of misalignment of the various planning policies came out very strongly. The interviews revealed that the misalignment is manifested in several ways:

- First, the timeframes of the various planning policies differ considerably presenting a serious challenge in implementing them systematically;
- Second, the horizontal misalignment of the planning policies emanates from GPG cluster arrangements and IGR structures that precludes smooth alignment between municipal and provincial development plans;
- Third, the ambiguity relating to the relationship between the province and the GCR make it difficult to make a clear distinction between GCR and provincial planning policies informed by provincial mandate. In this context, the policies fall short of the desired objective of being collaborative or partnering with municipalities and other stakeholders;
- Fourth, the allocation of powers and functions between the spheres hampers the collaboration and coordination roles of these policies. For instance, municipalities have strong transportation and infrastructure planning functions, effectively minimising the role and input of the province.

The interviews also revealed the misalignment of the key planning documents for the province and municipalities. There is no proper alignment between the PGDS and the municipal IDP in relation to planning and resource allocation. Moreover, the provincial and municipal planning cycles are different. This disjuncture between the annual planning and financial cycles of provincial and LG diminishes collaboration between the provincial and municipal levels of government and escalates divergence. This means that provincial and municipal public officials represent two different public services and have no legal obligation to harmonise their cycles or co-ordinate their budgetary processes. This incoherence contributes to a lack of alignment in plans and delivery programmes for the GCR.

Institutional challenges

The interviews also showed a number of institutional challenges relating to institutional arrangements in the GCR. The interviews revealed that the institutions in the GCR were established at different time intervals which means while some of them are now well established a number of them are still relatively new and are yet to find their footing in enhancing intergovernmental coordination and collaboration. This means that the institutional support for the GCR is lopsided.

The interviews confirmed that most of these institutions are sectoral. This means that their approach to collaboration and coordination of planning is mono-focused. While being mono-focused could be useful in the collaboration and coordination of a specific function within the GCR, it also propagates the silo approach as opposed to the more integrative approach that is desirable for the GCR planning and coordination.

There was a strong collaboration from the interviews pertaining to the current configuration of the intergovernmental institutional arrangements and the weakening of collaboration and coordination of planning activities in the GCR, in that uncertainty results from the concurrency of responsibility across spheres of government and the overlapping functions. This uncertainty undermines intergovernmental co-operation in the GCR, in the context where functional area encompasses several political jurisdictions.

The issue of duplication effort between different structures, agencies and spheres of government was also picked up from the interviews. The duplication is both vertical and horizontal because it relates to uncoordinated actions between the province and municipalities, between provincial sector departments operating in the same municipality, as well as among neighbouring municipalities themselves.

It became apparent from the interviews that there are also legislative constraints in the establishment of the GCR. The interviews showed that the IGRFA does not provide strong reinforcement of compliance across levels of government because intergovernmental alignment is envisaged as a voluntary requirement. This is further exacerbated by the lack of capacity in local and provincial governments to undertake collaborative intergovernmental actions.

Successes of the GCR

The provincial and local municipalities in the GCR have a good track record of practice of intergovernmental collaboration. A number of key infrastructure projects in the province have been accomplished through intergovernmental cooperation, and its reinforcement and solidification is ongoing. Positive aspects of cooperative governance entail, among others, intergovernmental plans and planning structures that give effect to the implementation of a range of key intergovernmental delivery projects. For instance, provincial and LG have collaborated in targeting government efforts to rehabilitate social and economic infrastructure across the GCR, with a view to stimulating local economies such as: upgrading inner-city areas,

building large new housing developments, large infrastructure developments such as new regional wastewater facilities and the development of Gautrain rapid rail link project.

Summary of findings for the GCR

The GPG established the GCR on the premise that the metropolitan municipalities of Johannesburg, Tshwane, and Ekurhuleni, and their neighbouring urban municipalities form a functional city region that should be governed in a cooperative manner. The intention was not to create an additional sphere of government. The effective functioning of the GCR therefore relies heavily on currently existing policies and institutions that strengthen intergovernmental collaborations and coordination. These policies and institutions have played a major role in ensuring that the functionality of the GCR is enhanced, notwithstanding their challenges. The GPG has utilised the various intergovernmental policies and institutions to recorded impressive achievements of intergovernmental collaboration as detailed above. Moreover, innovative institutions have also been created to strengthen intergovernmental collaboration and coordination, thereby making the GCR more functional.

However, the main challenge facing the institutionalisation of the GPG is that of explicitly demonstrating that the value derived from cooperation between the various intergovernmental institutions in the GCR, surpass the value of these institutions continuing to pursue their own self-interest. In the absence of overwhelming evidence in this regard, the nature and scope of collaboration and cooperation is continuously unspecified. This makes it difficult to define the parameters of the institutionalisation of collaboration and cooperation in the GCR.

The other challenge of the GCR is that it is pursuing various goals. Firstly, it aims at systematically aligning policy and implementation vertically among different spheres of governance. However, the independent decision-making power of each sphere is safeguarded by the Constitution rendering alignment dependent on separate institutions accountable to different constituencies, with congruently divergent mandates. Secondly, the GCR attempts to systematically align policy and implementation horizontally between line departments and agencies. However, given the intricate and interrelated nature of government functions, it is difficult to avoid territorial battles. Thirdly, the GCR also aim at coordinating the activities of nongovernmental actors who are important stakeholders in the GCR. The central challenge therefore is that of effectively coordinating the activities within and between spheres of government as well as the private sector.

The concurrency of responsibility across spheres of government and numerous overlapping functions are creating uncertainty that undermine intergovernmental cooperation in the GCR. Legal ambiguity also obscures which government tier is responsible for particular government functions. There is also no strong legal and constitutional guidance on cooperative government and intergovernmental collaboration. Other challenges in the region relate to duplication of effort between different levels of government, disjuncture between the planning and financial

annual cycles of provincial and LG, lack of capacity to undertake collaborative intergovernmental actions, and development plans that are not strategic or integrated.

A major challenge and recurring theme in the practice of intergovernmental relations impacting on the functionality of the CGR is that the Constitution tacitly introduces a natural tension between the relative autonomy of a particular sphere of government on the one hand, and the pursuit of a coherent government for South Africa through inter-governmental relations and collaboration on the other. This tension becomes more apparent when considering that the management of service delivery programmes is based on questions of jurisdiction between departments, organs of state or spheres of government while policy priorities cut across ministerial mandates and traditional policy fields. This renders mechanisms for managing service delivery through intergovernmental relations incoherent. The result is poor integration of activities, duplication, and a general inability to forge collaborative partnerships or to find common ground for joint action (Malan, 2005).

Inter-municipal cooperation should be facilitated through adequate incentives to create economies of scale and integration. Legal frameworks and encouragements from the national or provincial government are at times inadequate in achieving concrete change. More powerful instruments such as concrete incentives are required. The strongest incentives tend to be linked to financing (United Nations Conference on Housing and Sustainable Urban Development, 2017). Financial incentives could encompass scale economies through the potential for cost savings by joint initiatives, cost sharing for regional service provision or capital investments, and a desire to address fiscal inequality when significant tax base differences exist among the jurisdictions in the metropolitan area. (Andersson, 2015).

There are no such incentives in place for the GCR. This means that an adequate tool that is vital in fostering metropolitan governance and voluntary inter-municipal cooperation is absent. This compromises the functionality of the GCR.

Conclusion

The city region agenda is an important step forward for the development of urban areas internationally and particularly in South Africa, both from competitiveness and sustainability point of views. However, the establishment of the city region collaboration and cooperation needs patience and caution and a longer term view of coexistence with the currently existing national and sub national institutional arrangements.

The literature and international case studies have accentuated that case city region collaboration should be premised on cooperation between municipalities in the urban area. There is also an important role for the higher levels of government to initiate and support such types of cooperation, not with the enforcement of rigid structures but with policy and economic initiatives. It is critical that existing higher sub national government levels support city region level cooperation rather than envisioning them as competition. The cooperative approach and

organisational efforts of the core city towards the smaller municipalities in the city region are also absolutely vital.

The international case studies have demonstrated that city regions are definitely appropriate to the multi-level governance approach that is in place in South Africa. However, the purpose should not be to create a new level of government but rather to devise an innovative system and mechanism of cooperation and collaboration as demonstrated by the GCR case study. There are challenges pertaining to the improvements in the smooth institutional and policy frameworks that are supportive of city regions as detailed in the GCR case study. Most importantly financial incentives that are crucial for economies of scale are not yet in place. The GCR case study does demonstrate adequate potential for the development of city regions in South Africa. There are indeed good prospects for functional city regions in South Africa, if the appropriate institutional and policy framework and financial incentives are put in place.

Recommendations

With respect to city regions, the Commission makes the following recommendations:

1. The Minister of COGTA should assess the requirements in respect of key success factors for city regions to address inclusive development and local government service delivery failures, including:
 - Legal provisions;
 - Institutional setup scenarios - involving provincial government and/or metros and/or district municipalities and/or local municipalities, depending on the context;
 - Financial incentives; and
 - Rural and peri-urban developmental impact scenarios.

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