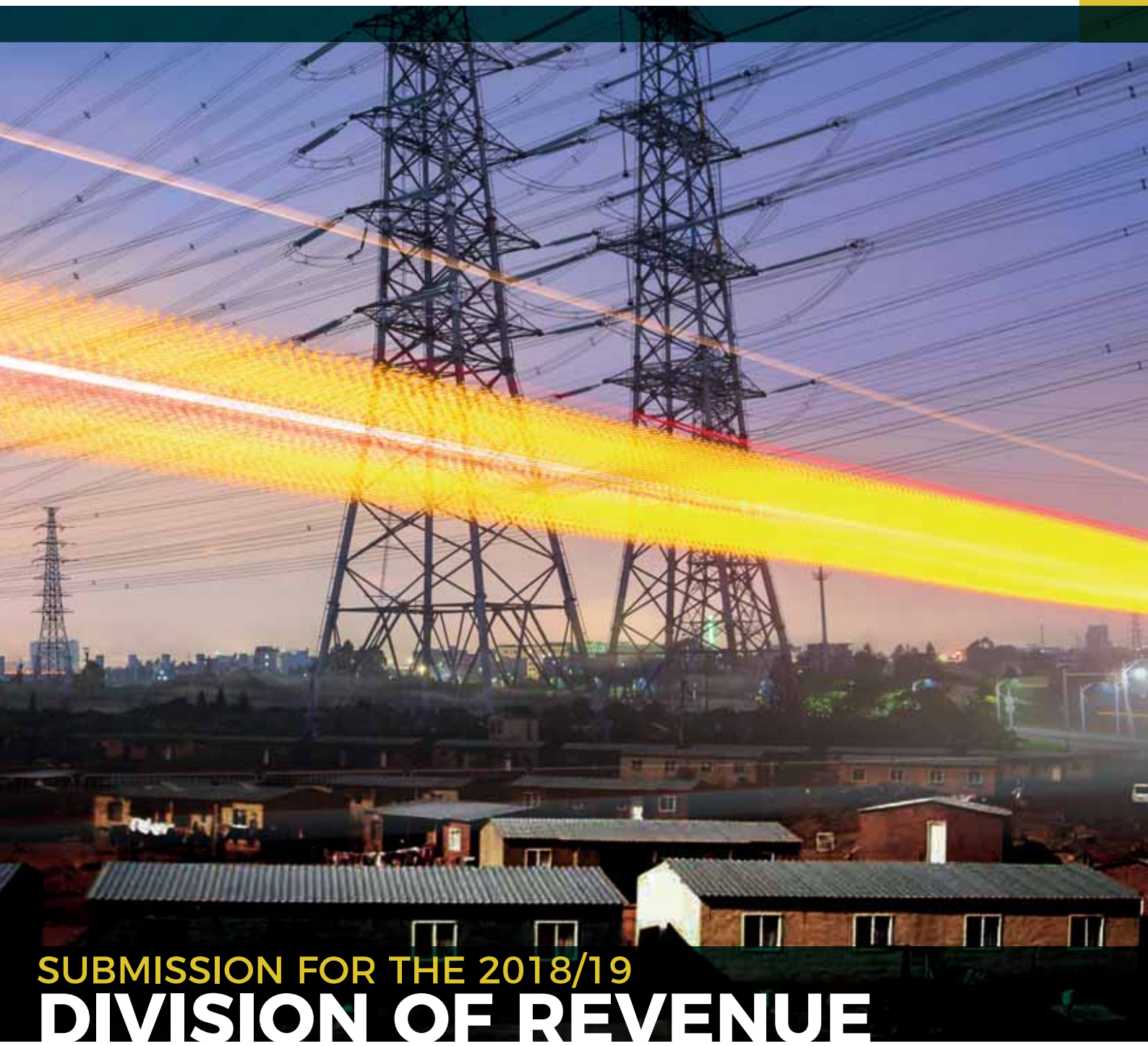
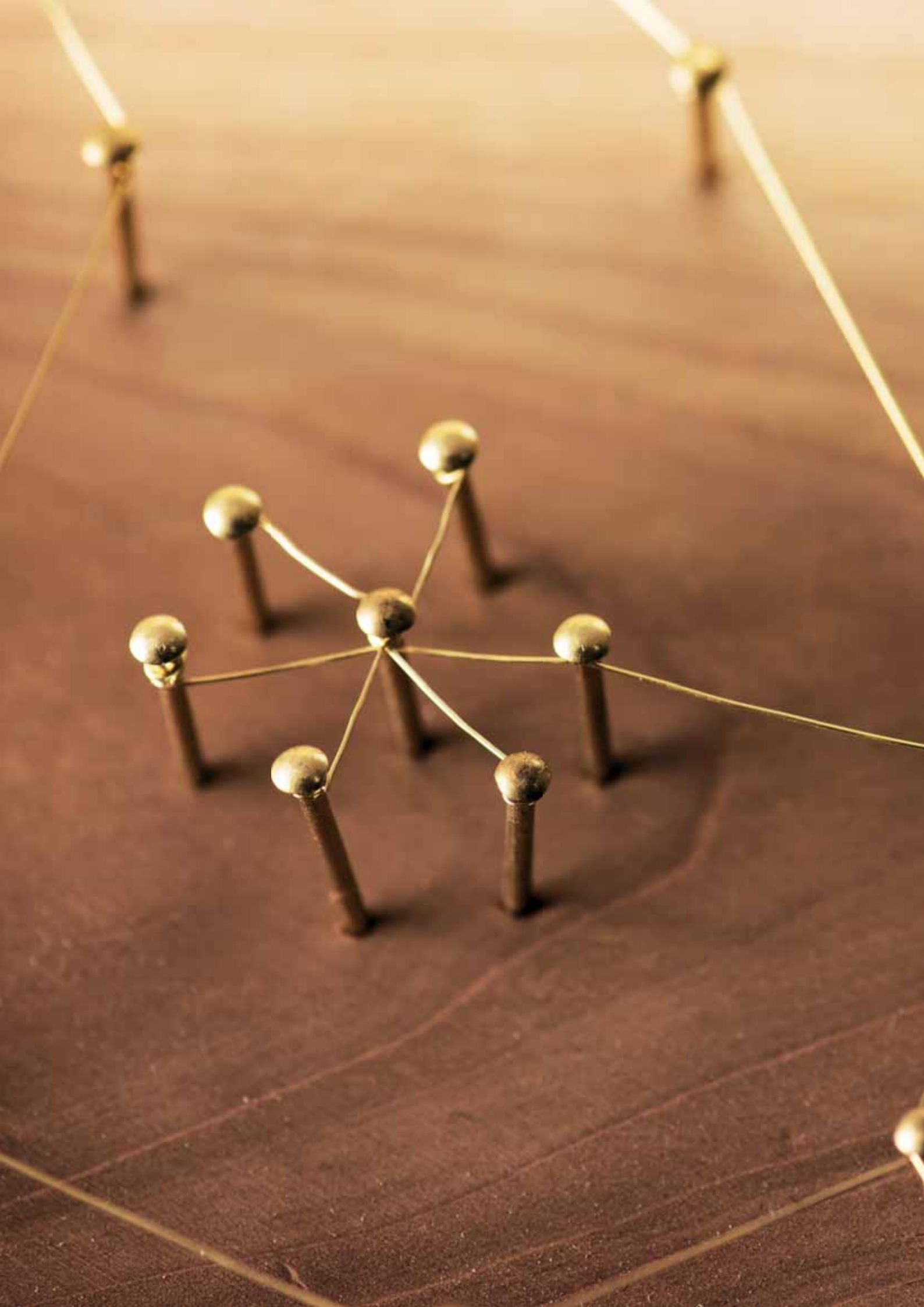
FINANCIAL AND FISCAL COMMISSION

For an Equitable Sharing *of National Revenue*



SUBMISSION FOR THE 2018/19

DIVISION OF REVENUE



FINANCIAL AND FISCAL COMMISSION

For an Equitable Sharing *of National Revenue*

TABLE OF CONTENTS

FINANCIAL AND FISCAL COMMISSION

For an Equitable Sharing *of National Revenue*

TABLE OF CONTENTS (CONTINUED)

Chapter 4: Transport and Mobility

Chapter 5: Aligning Urban Housing Supply and the Unhoused Urban Population

Chapter 6: Implications of Urbanisation Induced Learner Mobility on Education Planning and Funding

Chapter 7: Industrial Diversity and Economic Performance in Urban Municipalities

FINANCIAL AND FISCAL COMMISSION

For an Equitable Sharing *of National Revenue*

TABLE OF CONTENTS (CONTINUED)

Chapter 8: The Effects of Municipal Spending on Urban Employment

Chapter 9: Funding and Policy to Support Urban Informal Employment

Chapter 10: ICT and City Governance

Chapter 11: Financing of Urban Municipalities and Own Revenue Diversification

Tables

Figures

Foreword

The Financial and Fiscal Commission was established to make recommendations to Parliament on financial and fiscal matters pertaining to government. This *Submission for the 2018/19 Division of Revenue* is made in terms of Section 214(1) of the Constitution of the Republic of South Africa (1996), Section 9 of the Intergovernmental Fiscal Relations Act (1997) and Section 4(4c) of the Money Bills Amendment Procedure and Related Matters Act (2009).

The Submission contributes to achieving the goals of the National Development Plan by addressing the role intergovernmental fiscal relations can play in assisting to achieve these goals. It has a special focus on the challenges and opportunities created by rapid urbanisation for intergovernmental financing arrangements and is organised around the theme *'The Intergovernmental Fiscal Relations System and Urban Development in South Africa'.*

Topics covered were informed by the Commission's long-term strategy as well as consultations with experts in the field. The Submission contains eleven chapters organised into three parts. These analyse the link between urbanisation, growth, poverty and inequality; assess the potential contribution of alternative fiscal instruments and the trade-offs between growth and development; discuss complementary and mutually reinforcing policies such as the combination of compact growth policies with those that improve public transport and urban housing; and evaluate a number of programmes, including jobs programmes and those aimed at nurturing the informal sector, financing arrangements for urban development, and information communication technology innovation.

The Submission emphasises the need for much greater impetus in urban development. This includes investment in housing, more compact cities, transport integration and support for the informal sector; improvements to productivity and industrial diversification; improvements in schooling, particularly its planning in urban areas; and the need for accelerated job creation, especially for young work seekers. There is a need however to guard against separating the urbanisation agenda from the overall development agenda and government should continue making critical investments in non-urban areas.

The Commission would like to express its gratitude to all its stakeholders for the invaluable inputs provided during the preparation of the various technical reports that informed this Submission. We thank the Minister of Finance and National Treasury for their support, the South African Local Government Association, the chairpersons of the finance and appropriations committees in the provincial and national legislatures, the South African Cities Network, various technical advisers and the staff of the Commission.

We, the undersigned, hereby submit the Financial and Fiscal Commission's recommendations for the 2018/19 Division of Revenue in accordance with the obligations placed upon us by the Constitution of the Republic of South Africa.

Mr Velile Mbethe
Acting Chief Executive

Mr Kenny Fihla
Mr Krish Kumar
Mr Sipho Lubisi
Professor Gilingwe Mayende
Dr Sibongile Muthwa
Professor Daniel Plaatjies
Professor Nico Steytler

Date: 31 MAY 2017

Acronyms

AsgiSA	Accelerated and Shared Growth Initiative for South Africa
BEPP	Built Environment Performance Plan
CGE	Computable General Equilibrium
COGTA	Cooperative Government and Traditional Affairs
CSP	Cities Support Programme
CWP	Community Work Programme
DBSA	Development Bank of Southern Africa
DCOG	Department of Cooperative Governance
DEA	Data Envelope Analysis
DMU	Decision Making Unit
DOT	Department of Transport
DSBD	Department of Small Business Development
DSD	Department of Social Development
DTI	Department of Trade and Industry
EPWP	Expanded Public Works Programme
EU	European Union
FFC	Financial and Fiscal Commission
FLISP	Finance Linked Individual Subsidy Program
FMG	Financial Management Grant
GDP	Gross Domestic Product
GLS	Generalised Least Squares
GEAR	Growth Employment and Redistribution
GVA	Gross Value Added
ICT	Information and Communication Technology
IDP	Integrated Development Plan
IGFR	Intergovernmental Fiscal Relations
ILO	International Labour Organisation
IPAP	Industrial Policy Action Plan
IPTN	Integrated Public Transport Network
IUDF	Integrated Urban Development Framework
LED	Local economic development
LES	Local Government Equitable Share
MFMA	Municipal Finance Management Act
mSCOA	Municipal Standard Chart of Accounts
MSA	Municipal Structures Act
MSIG	Municipal Systems Improvement Grant
MSDF	Municipal Spatial Development Framework
MTEF	Medium Term Expenditure Framework
MTSF	Medium Term Strategic Framework
NDP	National Development Plan
NDPG	Neighbourhood Development Partnership Grant
NEMA	National Environmental Management Act
NGP	New Growth Path
NIBUS	National Informal Business Upliftment Strategy
NLTA	National Land Transport Act
NPC	National Planning Commission
NPNC	Non Personnel Non Capital
NSDP	National Spatial Development Perspective
OECD	Organisation for Economic Cooperation and Development
PES	Provincial Equitable Share
PFM	Pooled Financing Mechanism

PPP	Public-private partnership
PTIG	Public Transport Infrastructure Grant
PTNG	Public Transport Network Grant
PTOG	Public Transport Operating Grant
QLFS	Quarterly Labour Force Survey
RDP	Reconstruction and Development Programme
SACN	South African Cities Network
SDF	Spatial Development Framework
SDG	Sustainable Development Goal
SEIF	Shared Economic Infrastructure Facility
SEPTA	South Eastern Pennsylvania Trust Authority
SESE	Survey of Employers and Self Employed
SIPS	Strategic Integrated Projects
SPLUMA	Spatial Planning and Land Use Management Act
Stats SA	Statistics South Africa
TfL	Transport for London
UDF	Urban Development Framework
UNS	Urban Network Strategy
USDG	Urban Settlements Development Grant
WEF	World Economic Forum

Executive Summary

Enhancing the economic performance of cities now occupies centre stage in policy discourse in South Africa. Within this context the country aims to achieve faster, more inclusive and sustainable growth. Achieving inclusiveness involves addressing poverty, group equality, regional balance, inequality and empowerment. Urban economies play a significant role in all of this.

Urban development has been elevated within the domestic policy agenda in recent years, most prominently through various chapters of the National Development Plan and its vision that "by 2030 South Africa should observe meaningful and measurable progress in reviving rural areas and in creating more functionally integrated, balanced and vibrant urban settlements". Subsequently, the Cities Support Programme, the Integrated Urban Development Framework of 2016 and other government policies and interventions have added further impetus to urban development.

Internationally, countries around the world signed the Sustainable Development Goals which place urban development at the forefront, in particular Goal 11 which calls for "making cities and human settlements inclusive, safe, resilient and sustainable". Similarly, 167 countries adopted the New Urban Agenda at the Habitat III summit of 2016 further raising the urban development profile. This agenda sets a standard for sustainable urban development, including the provision of basic services for all, strengthened resilience in cities, reductions in greenhouse gas emissions and the promotion of greener cities.

With urban areas accounting for about 20% of land area, 62% of the population and over 60% of gross domestic product, cities are prominent players in South Africa's development prospects. While cities may contribute significantly to the economy, they face serious challenges to sustainable and inclusive development including high levels of poverty, socio-spatial inequalities, infrastructure deficits, insufficient skills and uneven educational performance. Economic growth, poverty and inequality-reduction objectives will require harnessing the growth potential and other transformational attributes associated with urban areas. These broader objectives underpin this Submission.

The Submission explores the theme *'The Intergovernmental Fiscal Relations System and Urban Development in South Africa'.* The objective is to make use of the potential of accelerated urbanisation, using intergovernmental fiscal relations and instruments, to drive the positive transformation of the economy toward the attainment of rapid economic growth that reduces inequality and eliminates poverty.

The Submission is laid out in three parts containing eleven chapters. Part one discusses the macroeconomic parameters underpinning urban development, urban policies, and institutions and regulatory structures that are concerned with the functioning of cities. Chapter 1 sets the scene, takes a closer look at the key macroeconomic parameters of urban development, tracks the structural shifts that have taken place in the economies situated in urban areas and provides a consistent framework to explore possible medium-term developments, based on the main structural features of South Africa's economy. The aim is to deepen our understanding of how intergovernmental fiscal relations affect or can be affected by urban development as well as how enhancing urban-rural linkages can help end poverty and reduce inequality and unemployment. Chapter 2 looks at urban policies and strategies that the country has put in place for addressing the contemporary and future challenges of urbanisation and urban population growth while chapter 3 assesses the extent to which the policies are contributing towards compact cities.

Part two focuses on city-level productivity, competitiveness and the wellbeing of residents. It begins with chapters that analyse the state of infrastructure, including public transport (chapter 4), housing (chapter 5) and education (chapter 6), across urban municipalities. The chapters underline the need to replace embedded practices of planning infrastructural services as 'siloed' projects with integrated approaches that adopt system-wide approaches. Without this there will be a lack of integrated urban infrastructure and land-use planning resulting in uncoordinated project implementation and inefficiencies that eventually retard economic growth.

What exogenous variables and which policy parameters have had the greatest impact on past city growth? Chapter 7 explores this using the feasible generalized least squares. It arrives at the conclusion that education and infrastructure investments are important determinants of economic growth in secondary cities and large towns and that increased dependency, measured by the share of youth and elderly in the population, has a positive effect on the growth in municipal per capita income. To address the often articulated fear that unbridled pursuit of growth and competitiveness may create inequalities and societal

division and affect growth and long-run sustainability, the final two chapters in this part address issues of urban unemployment (chapter 8) and the informal sector (chapter 9). These chapters review the status of urban unemployment and the informal sector and examine the extent to which fiscal instruments can be used to nurture the informal sector and reduce urban unemployment.

Part three looks at local government issues, with a dual focus. The ongoing urbanisation process comes with unique implications for governance and chapter 10 discusses lessons learned and opportunities for cities to make use of information and communication technologies for service delivery transformation. Chapter 11 unpacks the issue of municipal revenue diversification and considers how to use policy to create an enabling environment for enhanced revenue diversification.

Together these chapters provide an overview of what we know about urbanisation, urban development, and intergovernmental fiscal relations and points to some of the most urgent policy directions that could begin to strengthen linkages between national development and urban areas and contribute to reduced poverty, inequality and unemployment.

The main message then that emerges from the Submission is that far greater impetus is needed in South African urban development. This includes housing investment, more densified cities, transport integration and support for the informal sector. Productivity and industrial diversification must be improved; schooling, particularly its planning in urban areas, must be improved; job creation must be accelerated, especially for young work seekers. Finally we should guard against separating the urbanisation agenda from the overall development agenda and government should continue making critical investments in non-urban areas.

Recommendations

Below are the recommendations of the Commission for the 2018/19 Division of Revenue.

With respect to strategic options for rapid urbanisation to enable faster, more inclusive and sustainable economic growth, the Commission recommends that:

1. Over the medium term, government should continue with a gradual programme of fiscal consolidation that entails reducing the budget deficit moderately but consistently. Such efforts to preserve fiscal sustainability must be maintained in the future, even with the addition of longer-term programmes such as the National Health Insurance.
2. Government should actively and specifically continue pursuing the implementation of significant capital investment in public infrastructure that has a positive impact on total factor productivity and employment in the context of the National Development Plan.
3. National government develop and promote the development of urban-rural relations by:
    a. Strengthening rural-urban linkages and policy coordination between rural and urban spaces;
    b. Ensuring rural infrastructure investments are better targeted;
    a. Promoting productive social safety nets; and
    c. Providing incentives to encourage new industries and businesses in rural areas as a strategy to decongest urban areas.

With respect to strengthening the Integrated Urban Development Framework as well as the Cities Support Program for positive impact on urban development, the Commission recommends that:

1. The Department of Cooperative Governance and Traditional Affairs and Department of Planning, Monitoring and Evaluation continue strengthening coordination and monitoring mechanisms (by ensuring that departmental sector plans and strategic investments are aligned to local spatial plans and priorities) and coherent with the national objectives espoused in the Integrated Urban Development Framework.
2. The Department of Cooperative Governance and Traditional Affairs and National Treasury consolidate the urban development related grants (for example incorporate the Integrated City Development Grant into the Urban Settlement Development Grant) so as to achieve the Integrated Urban Development Framework objectives and address urban development holistically.

With a view at achieving compaction in South African metropolitan cities, the Commission recommends that:

1. National Treasury introduces an incentive grant specifically targeted at city compaction, an urban form that has the potential to remedy apartheid geography and bring the masses closer to the opportunities of work and facilities. The spatial development grants currently accessed through the Built Environment Performance Plans treat compaction as only but a small and negligible component of spatial transformation.

With the need to enhance urban transport efficiency and mobility, the Commission recommends that:

1. The Department of Transport should review the Public Transport Network Grant and investigate options to shift sources of funding towards retaining locally-earned fiscal revenue and ring-fence the local income sources for public transport use. Examples include possible retention of a larger portion of the fuel levy generated in the municipality.
    a. Develop case studies or support pilot projects in selected municipalities to develop key potential sources of funding including funding related to parking, developer charges and ring-fencing a portion of the fuel levy.
2. The Department of Transport should approve and pilot the consolidation of public transport functions as defined in the National Land Transport Act within a well-capacitated city, with supporting funding (in line with a previous Commission study). In this regard, the Department of Transport should:
    a. Identify the most appropriate options for arrangements outside of large urban municipalities where financial resources and capacity to take on the integrated function are more limited; and
    b. Identify the legal and institutional structures needed to properly integrate planning and management across modes (including rail) into the broader management of municipal transport networks, which are also adequately funded by a conditional grant.
3. The Department of Transport should support the development of approaches to Integrated Public Transport Networks that support financial sustainability. These approaches should focus on leveraging the strengths of existing services, promoting incremental improvement of public transport based on affordability and impact, recognising the significant role that new technologies will play in providing demand- responsive services, and considering alternative models of industry transformation. This could take the form of piloting and sharing learning from revised approaches to Integrated Public Transport Networks in one or more urban municipalities and should be funded through the Integrated Public Transport Network Grant or a similar funding instrument.

With respect to matching housing supply to the needs of the growing urban population, the Commission recommends that:

1. The Department of Human Settlements should undertake a review of the Finance Linked Individual Subsidy Programme to find ways of ensuring that qualifying individuals who are single and without dependants are included as beneficiaries from the programme and that the Finance Linked Individual Subsidy Programme is implemented in a standardised manner across provinces.
2. Provincial departments of human settlements and other key departments including the provincial departments of basic education and transport should align their infrastructure delivery plans particularly for new human settlements development. This can be done by:
    a. Establishing functional inter-sectoral coordination committees where relevant departments will meet to discuss new infrastructure development projects relating to habitable human settlements
    b. Ensuring that the portion of Education Infrastructure Grant and funding from the provincial equitable share are aligned to the portion of the Human Settlements Development Grant for new housing developments.

With respect to addressing problems for education sector planning and funding due to urbanisation-induced learner mobility, the Commission recommends that:

1. The National Treasury should incorporate weighted learner socio-economic profiles into the education component of the provincial equitable share formula as an additional indicator of education needs.
2. Both the National Treasury and Department of Basic Education must ensure that the framework for the Education Infrastructure Grant incorporates the need for provincial infrastructure plans to take into account spatial demographic patterns and forecasts, particularly when decisions to build, expand or maintain schools are made.

3. The Department of Basic Education must allocate learners with unique identification numbers when they first enter the school system to (1) ensure that learners are allocated the requisite funding that is consistent with their socio-economic profile when they move between schools and (2) enable seamless tracking and measurement of movements across provinces and within districts.

With the objective of improving industrial diversity and economic growth in urban municipalities, the Commission recommends that:

1. Through National Treasury, government establishes an economic diversification plan as part of its objective to support cities in promoting spatial transformation and economic growth. This fund can either be ring-fenced within existing grants linked to growth and spatial transformation of cities (such as Integrated Cities Development Grant), or specified as a minimum spending requirement to ensure that recipient municipalities spend allocated funds towards programmes that broaden and deepen spatial transformation and economic growth through diversification of economic activities within their jurisdictions.

With a view at enhancing employment effects associated with urban public spending, the Commission recommends that:

1. The employment creation role of the Expanded Public Works Programme should be expanded to specifically target secondary cities and large towns.
2. The Departments of Public Works and Cooperative Governance and Traditional Affairs should carry out an assessment of the Expanded Public Works Programme integrated grant for municipalities to ascertain how the grant can be redesigned to encourage more secondary cities and large towns to apply for a bigger portion of this grant.

With respect to creating conditions for promotion of urban informal employment, the Commission recommends that:

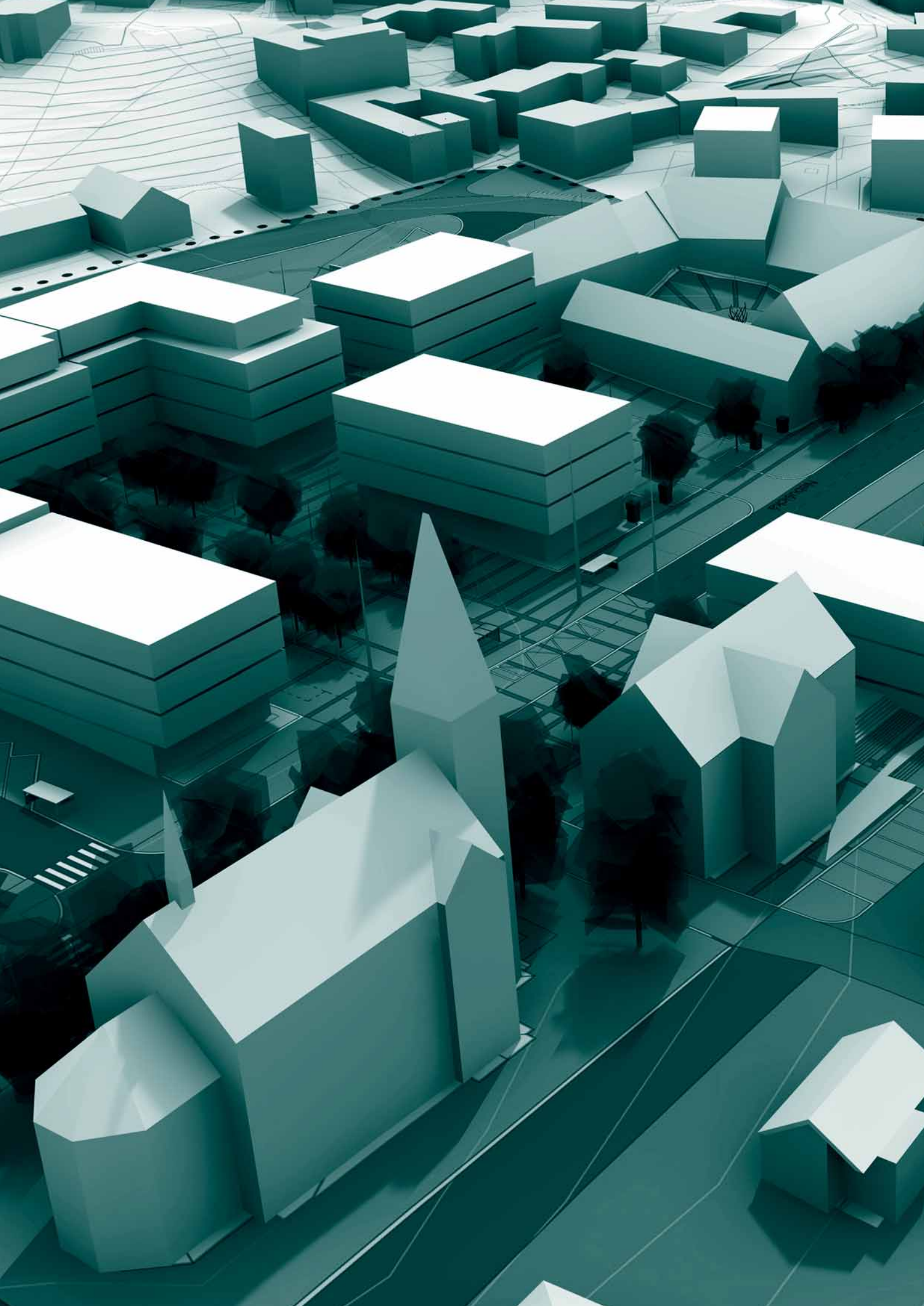
1. The Departments of Small Business Development, Cooperative Governance and Traditional Affairs and provincial departments of economic development consolidate, regularise into long-term budget line items and decentralise the different funding programmes (such as the Jobs Fund, the Informal and Micro-enterprise Support Programme and the Shared Economic Infrastructure Facility) for informal enterprise development currently residing within national and provincial departments and development finance institutions to metropolitan municipalities and secondary cities.
2. The Department of Small Business Development in collaboration with the provincial departments of economic development must invest in grant beneficiary information management system to minimise double dipping and to monitor the impact of various funding support programs including the Jobs Fund, Informal and Micro-enterprise Support Programme and the Shared Economic Infrastructure Facility.
3. The Department of Small Business Development as the custodian of informal enterprise development policy and coordination with the cities should ensure that existing financial and non-financial support programmes holistically address informal enterprise growth constraints within the city space rather than focusing on formalising informal enterprises.

In order to enhance intergovernmental instruments, institutional and governance arrangements pertaining to the provision and maintenance of information and communication technology in urban municipalities, the Commission recommends that:

1. National Treasury should ensure that allocations for assisting municipalities with municipal standard chart of accounts implementation through the Financial Management Grant be ring-fenced and deliberately biased towards lesser resourced urban municipalities who struggle under the financial burden of attaining compliance with the municipal standard chart of accounts financial reform.
2. In the absence of a differentiated approach to the roll out of the nationally driven municipal standard chart of accounts regulations, National Treasury should ensure that technical assistance is provided to lesser resourced municipalities to assist with change management. To this end, National Treasury should deploy technical advisors to the most under-capacitated and under-resourced municipalities for a short period of time to assist with the shift to municipal standard chart of accounts compliance. This will assist in strengthening the successful implementation of this local government financial management reform.

With respect to own revenue diversification and financing models for urban municipalities, the Commission recommends that:

1. National Treasury improves access to credit markets for large cities by:
    a. Allowing them to use their infrastructure grant funding allocations to leverage private capital.
    b. Establishing a credit rating mechanism for municipalities with the Development Bank of Southern Africa as the most suitable public entity to lead the establishment of this process.
    c. Requesting the Development Bank of Southern Africa to facilitate the creation of a special purpose vehicle to facilitate the pooling together of financial resources by large cities for the purpose of joint bond issuance and lending to large cities.
2. The Public Private Partnership Unit at National Treasury improves the flow of public- private partnerships within municipalities by:
    a. Streamlining the public-private partnership approval process by subjecting only high value (above R100 million) and complex projects to rigorous feasibility studies.
    b. Using the Financial Management Grant to build capacity within large cities in specialised skills in public-private partnership development, procurement, negotiation and monitoring.
    c. Incentivising PPPs through adopting a national facility for financing feasibility studies in municipalities.
3. National Treasury creates awareness of land value capture fiscal instruments among large cities and extends the scope of the Financial Management Grant to cater for capacity building in the design and implementation of land value capture mechanisms.



FINANCIAL
AND FISCAL
COMMISSION

For an Equitable Sharing
of National Revenue

Part 1:

Introduction to Urban Development and Intergovernmental Fiscal Relations

Chapter 1: Introduction to Urban Development and Intergovernmental Fiscal Relations

1.1 Introduction

At the dawn of democracy South Africa inherited the burden of a society characterised by large income and social inequalities. These still remain a huge challenge (Financial and Fiscal Commission, 2016). Far-reaching macroeconomic reforms have been undertaken in order to redress past injustices, particularly in terms of access to basic services (e.g. electricity, water and sanitation, housing, health and education) and income and employment opportunities. From 1994, the Reconstruction and Development Programme (RDP) became the official macroeconomic policy of the new democratic government, and was followed by the Growth, Employment and Redistribution (GEAR) programme in 1996, the Accelerated and Shared Growth Initiative (AsgiSA) framework in 2006, the New Growth Path (NGP) in 2010 and the National Development Plan (NDP) in 2012. While the fiscal choices underlying these broad programmes have resulted in positive growth rates, improved welfare and standards of living, and expanded access to bulk economic infrastructure for a majority of the population, the country still faces tremendous shortfalls in economic and social infrastructure manifested in high levels of unemployment, inequality and poverty.

In response, the NDP set ambitious goals for social reforms to eliminate poverty and reduce inequality by 2030. To provide the necessary revenue to meet these goals, the economy needs to grow faster — by 5.4% per annum. The dilemma is that the country currently faces an economic growth crisis. Since the Great Recession of 2008/09, the country has been trapped in low growth and poor quality growth. As a result, the country needs to focus on economic growth and its redistribution. Growth is affected by the long-standing structural weaknesses in the economy, a result of long-term planning and financing challenges that will need to be addressed. To respond to this challenge, the Financial and Fiscal Commission embarked on a five-year research strategy under the banner *The Intergovernmental Fiscal Relations System and National Development in South Africa. Within this, the research work has been sequenced into several stages.*

For the 2018/19 division of revenue recommendations, the theme is *'The Intergovernmental Fiscal Relations System and Urban Development in South Africa'.*[1] Urban development has been elevated within the domestic policy agenda in recent years, most prominently through various chapters of the NDP and its vision that "by 2030 South Africa should observe meaningful and measurable progress in reviving rural areas and in creating more functionally integrated, balanced and vibrant urban settlements". Subsequently, the Cities Support Programme (CSP), Integrated Urban Development Framework (IUDF) of 2016, and other government policies and interventions, have added further impetus to urban development. Internationally, countries around the world signed the Sustainable Development Goals (SDGs) placing urban development on the forefront, particularly Goal 11: *Making cities and human settlements inclusive, safe, resilient and sustainable.* Similarly, 167 countries adopted the New Urban Agenda at the Habitat III summit of 2016, further raising the urban development profile. This sets a standard for sustainable urban development including the provision of basic services for all, strengthening the resilience of cities, reducing greenhouse gas emissions and promoting greener cities.

Rapid urbanisation is a critical ongoing trend shaping national development that will continue in 2018 and beyond. The proportion of the urban population to total population in South Africa was 18.2% in 1911 and by 2001 it was 56.6% (Vacchiani-Marcuzzo, 2005). The urban population has increased rapidly from 54% in 1994 to 64.3% in 2014 and is projected to grow to 70% by 2030 (National Planning Commission, 2011: 84).

The end of apartheid in 1994 is largely responsible for the recent surge in urbanisation. Externally it signalled the end of the country's isolation from international markets while internally this led to the removal of decades of restrictive apartheid legislation which had artificially held back migration into cities and enforced a high level of circular migration.

Table 1 shows the demographic shifts that occurred in South Africa between 2000 and 2011. There is an increase in the urban population, at an annual average growth rate of 2.2%, except for Limpopo with a -0.4% decrease. It also illustrates the decrease in the country's rural population, at an annual average growth rate of -0.1%, except KwaZulu-Natal (1.7%), Mpumalanga (0%), and Limpopo (0.5%). How the expansion of urban areas is managed in future years will be critical for ensuring sustained economic growth and national development.

[1] In 2015 the theme of the Submission was 'Responding to South Africa's Infrastructure Challenge'. In 2016 the theme, 'The Intergovernmental Fiscal Relations System and Rural Development in South Africa', reflected the demographic, economic and political importance of rural areas.

Table 1. Population growth by province and rural settlements, 2000 and 2011

Province	Urban			Rural			South Africa		
	2000	2011	Annual Growth Rate (%)	2000	2011	Annual Growth Rate (%)	2000	2011	Annual Growth Rate (%)
Western Cape	3,787,434	4,933,785	2.4	442,954	327,954	-2.7	4,230,387	5,261,739	2.0
Eastern Cape	2,387,806	2,948,888	1.9	4,513,109	3,965,479	-1.2	6,900,915	6,914,367	0.0
Northern Cape	625,576	812,220	2.4	250,569	72,391	-10.7	876,145	884,612	0.1
Free State	2,026,699	2,364,841	1.4	781,997	392,262	-6.1	2,808,695	2,757,103	-0.2
KwaZulu-Natal	4,422,634	5,109,401	1.3	4,632,324	5,580,124	1.7	9,054,958	10,689,525	1.5
North West	1,422,508	1,537,879	0.7	2,173,855	2,149,150	-0.1	3,596,363	3,687,029	0.2
Gauteng	7,634,846	10,968,996	3.3	300,610	74,616	-11.9	7,935,456	11,043,612	3.1
Mpumalanga	1,274,669	1,590,116	2.0	1,793,727	1,799,774	0.0	3,068,396	3,389,889	0.9
Limpopo	748,506	718,727	-0.4	4,823,535	5,076,419	0.5	5,572,041	5,795,146	0.4
All provinces	24,330,677	30,984,853	2.2	19,712,680	19,438,169	-0.1	44,043,357	50,423,022	1.2

Source: Commission's calculations based on 2000 and 2011 Income and Expenditure Surveys.

Urban economies play a significant role in development and economic growth. In 2015, the nine biggest cities contributed 60% of gross value added (GVA), and the five biggest metropolitan municipalities (metros) accounted for 52% of total output. Five of the cities had a higher GVA growth rate than the rest of South Africa. While urban areas are contributing significantly to the economy, rapid urbanisation and population growth are presenting special challenges to urban development policy. These include high levels of poverty, socio-spatial inequalities, infrastructure deficits, insufficient skills and educational performance. High levels of unemployment remain a top concern. The urban poor are typically located on the urban periphery living in informal settlements; they face high transport costs and have little access to housing and services. Compared to similar cities internationally, South African cities use land inefficiently and are less dense. Existing land-use patterns marginalise the poor, deepen historic inequalities, and result in high carbon emissions (Financial and Fiscal Commission, 2011). City governments are not optimally geared for meeting the challenges. They do not have sufficient funding particularly for infrastructure investment. Outside the metros urban governments are impeded by a costly two-tier system and city governments use obsolete management systems. These suboptimal governance structures and systems not only exacerbate poverty and inequality, but are also costly to society in terms of lost gross domestic product (GDP) and the further marginalisation of vulnerable population groups.

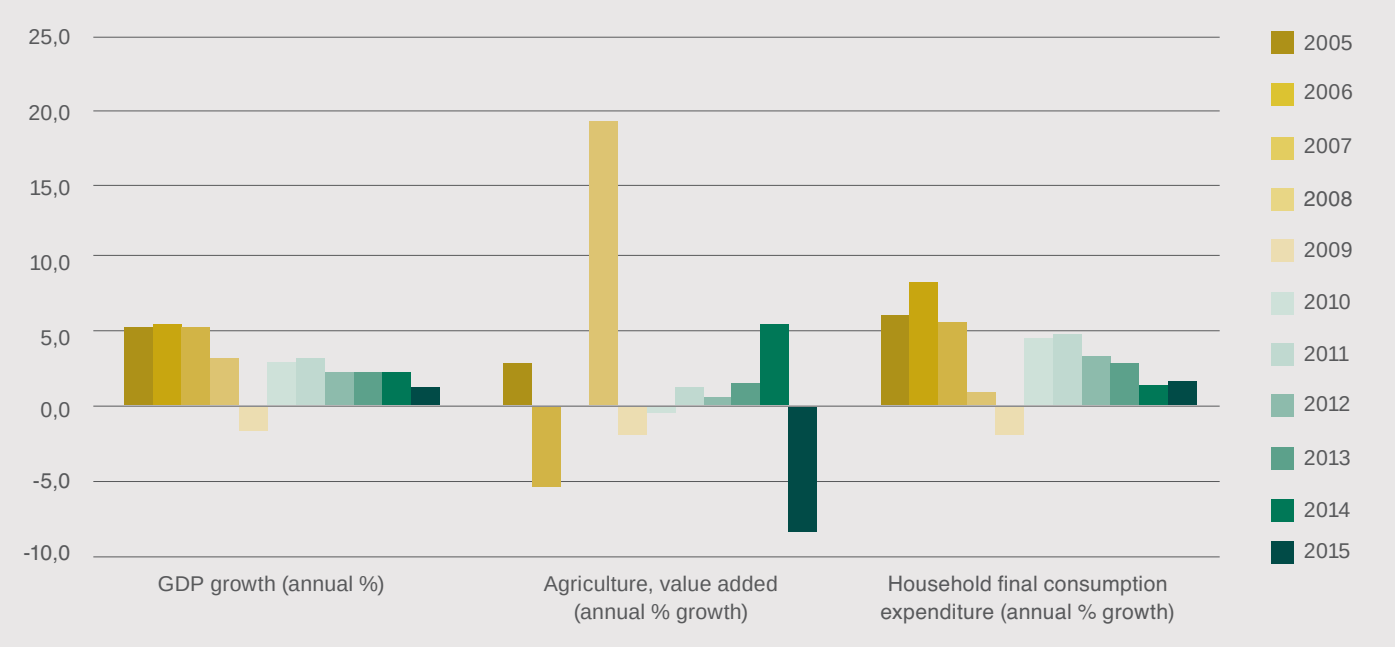
It is in this context that this Submission seeks to explore what national and subnational governments might do to harness the economic possibilities of rapidly expanding cities. To do so, intergovernmental fiscal relations (IGFR) and structures need to be strengthened and, where antiquated, completely overhauled. The objective then is to assess the evidence and add insights with respect to the following question: *What are the most effective IGFR interventions for urban governments to increase their impact on infrastructure and service provision, and hence on economic development?* The intended thrust stems from a hypothesis that the current IGFR instruments and institutions for urban development are both inadequate and inefficient to meet societal goals relating to economic growth, poverty, unemployment and inequality.

1.2 Economic and Fiscal Outlook

1.2.1 Looking back at 2005-2016: A glimmer of hope

The decade 2005–2015 saw important signs of resolve and commitments to sustainable development and fiscal consolidation in South Africa. This resolve was rewarded by positive economic growth. Despite being hit negatively by the Great Recession and its aftermath, some positive signs emerged of better things to come. Take economic growth and wellbeing (measured by household consumption) for example. While there has been a gradual slowdown of the national economy, measured by the GDP growth rate recorded over the decade 2005–2015, the national economy still grew on average by 2.3% per year over that period above the population growth rate (Figure 1). Households' final consumption expenditures show a similar pattern. Sectorally, over the period, the largest average contributions to real GDP growth were (a) general government services; (b) finance, real estate and business services; and (c) wholesale, retail and motor trade, catering and accommodation. The most volatile contributions came from the mining and quarrying, and manufacturing sectors. Historically, these sectors have been most affected by labour strikes (based on Department of Labour data on work days lost and the number of workers involved in strikes). In addition, agriculture growth shows an erratic pattern. It should be noted that, for much of the past decade, agriculture, mining and quarrying, and the manufacturing sectors have been shrinking, which is of concern since these sectors are important contributors to exports and labour absorption.

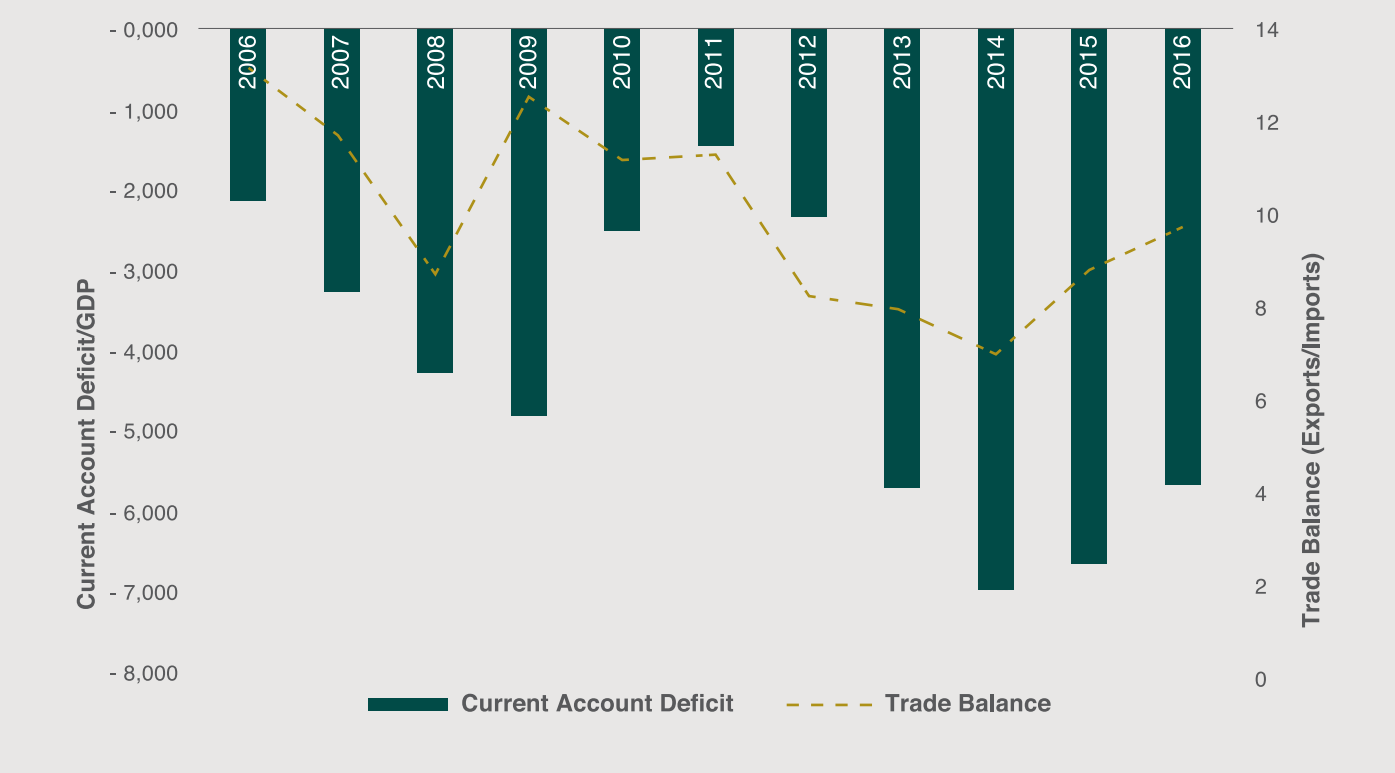
Figure 1. Real performance of the economy by sector 2005–2015, annual growth (%)



Source: Commission's calculations.

Trends in global outlook have a strong impact on the level and growth of the domestic economy through the trade balance (the ratio of exports to imports). Through its interlinkages with the global economy, a significant proportion of domestic production (about 30%) is exported to the rest of the world. In the aftermath of the 2008 global financial and economic crises, a marked slump in global commodity prices, subdued economic performance across major industrialised nations, and the deceleration in the growth trajectory of the Chinese economy had an adverse impact on South Africa's terms of trade and current account deficit (see Figure 2). Between 2006 and 2016, the trade balance declined at an average rate of 0.8%. In the latter half of 2016, the moderate increases in commodity prices and the performance of the Rand contributed to improvements in the terms of trade. While these factors had been expected to reduce the current account deficit, it still remained wide. Relative to the less than 3% levels pre-2010, the current account deficit as a share of GDP has averaged more than 5% since 2010.

Figure 2. South Africa's trade balance and current account deficit, 2006–2016

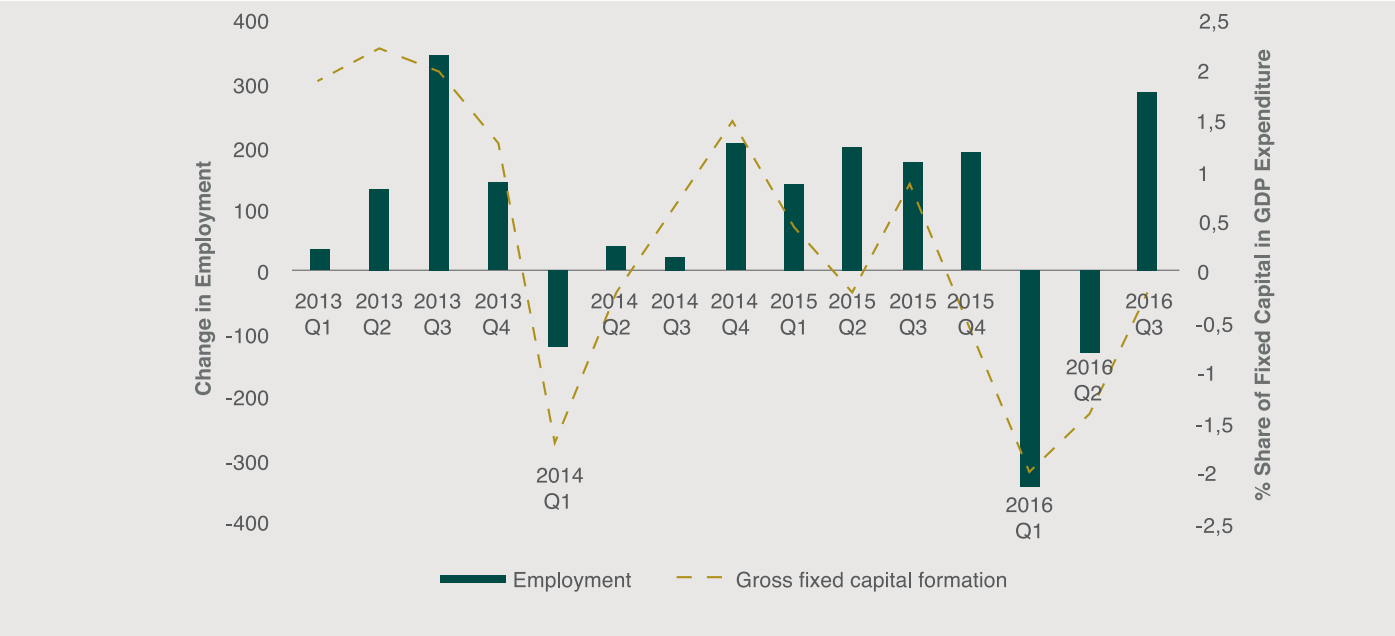


Source: Commission's calculations based on South African Reserve Bank Statistical Database.

A final source of growth is gross fixed capital formation.[2] Accelerating existing levels of investment is vital to government's job-creation initiatives. However weakening investment growth, in tandem with low employment levels, has become an associated feature of the country's low growth environment during the period (see Figure 3). Weakness in investment growth has been particularly acute within private business enterprises where, relative to its peak of over 26% in 2006, expansions in investment grew by a modest 2.6% in 2015. At an aggregate level, investment growth averaged more than 16% between 2000 and 2008. In the post global financial crises period, this growth has declined to 8.5% on average between 2008 and 2015. As a result of government's stated commitment to addressing infrastructure bottlenecks and enhancing socio-economic investments, much of the investment growth has been driven by the public sector. While slowing investment growth within the private sector is partly a correction from relatively high pre-crisis levels, it also reflects obstacles faced as a result of declining commodity prices and stagnant global economic growth, and more broadly, investors' concerns over uncertainty generated by political risks.

[2] Gross fixed capital formation includes infrastructure investments, e.g. the construction of roads, railways, schools, offices, hospitals, private residential dwellings, and commercial and industrial buildings.

Figure 3. Gross Fixed Capital contributions to GDP expenditure and employment changes, 2013–2015



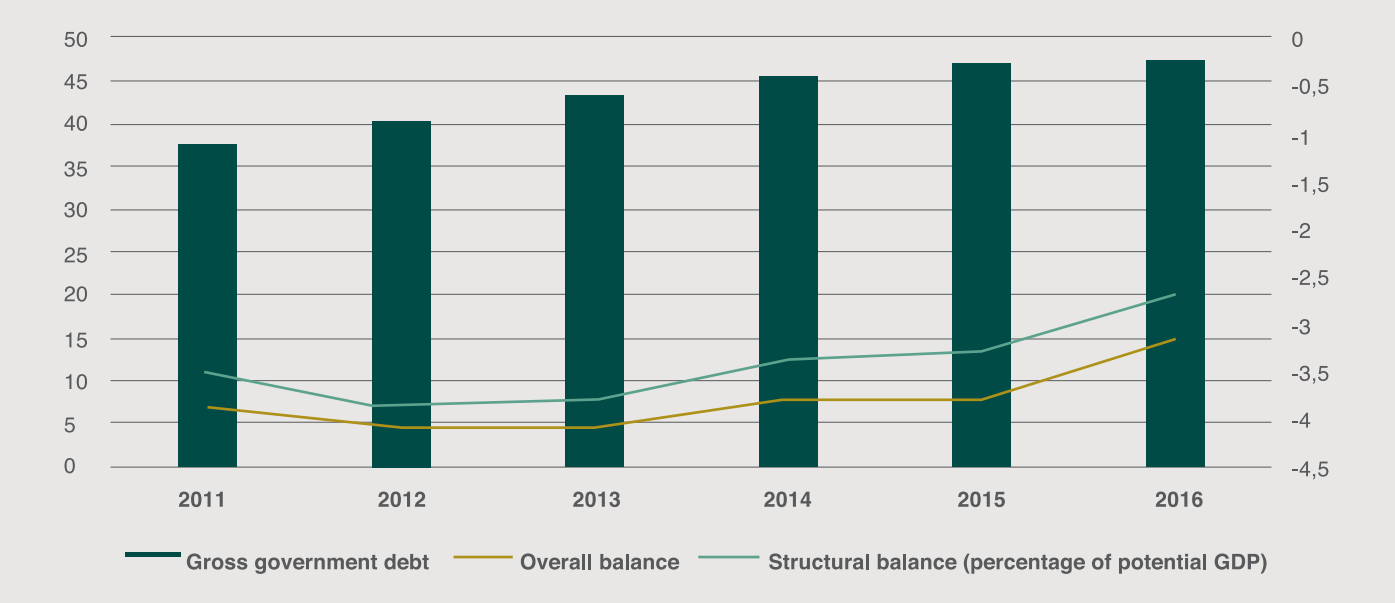
Source: Commission's calculation based on Statistics South Africa Quarterly Labour Force Survey, fourth quarter, 2016.

Turning to fiscal aggregates, government has done an outstanding job in prudent fiscal management. Fiscal policy was saddled with many challenges at the advent of 1994, including a relatively high public debt/GDP ratio and a high budget deficit that weighed down the ability of the government to democratise government expenditure and support development. Prior to the global economic crisis, policy succeeded: the public debt-to-GDP ratio fell from nearly 50% in 1994 (the result of excessive expenditure by the National Party to finance its homelands projects) to 45% in 1995. From 1996 government took measures that prevented further increases in the debt level and (only in 2000) started to reduce the debt level as a percentage of GDP. By 2008 government surpluses and low deficits had brought the debt level materially down to less than 24%. However, the international crisis in 2008 and the local economic consequences meant that the percentage to GDP inevitably increased, as deficits were incurred. Unlike most developing countries, thanks to prudent fiscal and monetary management during periods of growth, South Africa was able to take a countercyclical stance during the global financial crisis.3 The massive expenditure programmes earmarked for World Cup 2010 infrastructure provided further stimulus. However, the countercyclical stance led to rising budget deficits: the public debt-to-GDP ratio increased from 23% in 2008 to 45.5% in 2016. Some fiscal adjustment was therefore required in order to stabilise the debt dynamics.

In the face of global economic headwinds, the fiscal position was such that the countercyclical approach had run its course. The structural budget deficit could no longer be reduced through a cyclical upturn in revenues. The 2015/16 budget therefore announced the implementation of various measures aimed at narrowing the budget deficit, stabilising debt and rebuilding fiscal space. A fiscal reform package consisting of a lower expenditure ceiling and higher taxes was expected to reduce the deficit from an estimated 3.9% of GDP in 2014/15 to 2.5% by 2017/18. Net debt was projected to stabilise at 43.7% of GDP in 2017/18 (see Figure 4). The overall direction or fiscal stance is summarised by the primary balance (the gap between government revenue and non-interest spending). The structural primary balance is projected to improve by 1% of GDP over the medium term. Indeed it has been declining progressively since 2011 which suggests that a large element of the budget deficit is simply being applied to servicing debt rather than being a function of general spending exceeding revenue.

[3] A countercyclical stance is when government's policies work against the economic cycles, i.e. when the economy is in an upswing, government policies are aimed at cooling down the economy; when the economy is in a downturn, government policies are aimed at stimulating the economy. In the case of South Africa, fiscal reserves built up during periods of growth meant the government had money to spend in order to stimulate the economy.

Figure 4. South Africa's fiscal position, 2011–2016



Source: International Monetary Fund.

Finally, it is important to assess how living conditions of people have been impacted. Statistics South Africa (2014) proposes three poverty lines to calculate poverty profiles and inequality at national and regional levels as well as across specific population groups4. These are the food poverty line of R210 per month in 2005/06 using March 2006 prices, inflation-adjusted to R321 per month in 2010/11; the lower-bound poverty line of R300 per month in March 2006 prices, inflation-adjusted to R443 per month in 2010/11; and the upper-bound poverty line of R431 per month in March 2006 prices, inflation-adjusted to R620 per month in 2010/11. Using the Income and Expenditure Survey for 2005/06 and 2010/11 the changes in poverty between 2006 and 2011 can be summarised in the following way. There is a notable decline in consumption poverty between 2006 and 2011. The depth and severity of poverty also declined between 2006 and 2011. The majority of the poor live in rural areas. In 2006, eight out of ten people (80.8%) living in rural areas were poor, which was double that in urban areas (40.7%). By 2009, the proportion of poor people had increased to 83% in rural areas compared to 41% in urban areas. In 2011, more than two-thirds (68.8%) of rural dwellers were still living in poverty as compared with less than a third of residents (30.9%) in urban areas. The rate of reduction between the two settlement types from 2006 to 2011 was also different – there was a 15% reduction in poverty levels in rural areas, which was much lower than the 24% reduction in urban areas. As far as inequality is concerned, little progress has been made nationally (the Gini coefficient declined slightly from 0.673 to 0.652 between 2006 and 2011).

At provincial level, the inequality picture is mixed. The Western Cape recorded the highest reduction in the Gini coefficient. Inequality increased in the Northern Cape, North West, and Limpopo provinces. Breaking down the sources of inequality shows that close to 34.7% of inequality in 2011 was attributable to the urban-rural divide compared to around 54.4% which arose from differences within these broad areas. The component of inequality due to disparities between urban and rural areas declined between the two periods, suggesting some kind of 'convergence' between the two regions. At provincial level disparities across provinces contributed 38.5% to inequality while 15.3% of inequality was attributable to differences within provinces. Further exacerbating poverty and inequality is the situation in education and employment, in particular youth unemployment. For instance, the City of Johannesburg has a large young population with a youth unemployment rate of around 31.5%. Youth unemployment in the City of Johannesburg exceeds the total unemployment rate and therefore youth unemployment poses economic risks, not only at present, but also for the future. The larger the group of marginalised young people who remain un- or under-employed, the larger the threat that dependency ratios will rise as the demographic bulge passes. Over the longer term, a large group of adults who have been unable to save or accumulate through their productive years may now be dependent on a smaller group of younger employed people.

[4] There is no official national poverty line.

The period has thus seen government doing a sterling job in prudent fiscal management. Fiscal choices have resulted in positive growth rates, improved welfare and standards of living, and expanded access to bulk economic infrastructure. Behind these positive signs, concerning developments reveal the persistence of tremendous shortfalls in economic and social infrastructure. The period also witnessed growing uncertainties linked to stagnant economic growth, high and persistent income inequalities and poverty levels as well as rapid changes in the political landscape (elaborated on in the following section). These uncertainties and persistent challenges will prove to be a major test of whether the momentum created will propel the new sustainable development agenda forward and whether action will be taken to improve the lives of millions of people who continue to be ravaged by poverty, inequality and joblessness.

1.2.2 Looking forward to 2018 and beyond: Great uncertainties despite strong resolve

The resolve and commitments to sustainable development and prudent fiscal management that marked the period to 2016/17 are being tested as we look forward to 2018 and beyond. Of particular concern are the uncertain prospects for economic growth and changing political paradigms in domestic and global economies alike, which create an uncertain outlook for the development landscape.

Domestically there are many political developments. For example, as argued in Mabugu (2017), the present environment of fragile growth is making it difficult to tackle the triple challenges of high unemployment, fiscal and external imbalances. The economy needs to achieve higher growth rates in order to generate jobs particularly for young workers, tackle the growing social tensions, and reduce poverty and inequality. These dire economic consequences, coupled with perceptions of corruption and impatience with service delivery and social outcomes following two decades after freedom, are slowly but inextricably reshaping the political economy landscape in ways which could significantly erode the dominance of the ruling party including in urban areas, a trend that has started in a number of large and metropolitan cities as witnessed in the 2016 municipal election results. These developments appear to be a significant threat to future African National Congress dominance, which in turn may have implications for intergovernmental relations such as increasing tensions in equalisation schemes.

Added to this, a new political narrative appears to be emerging beyond the old politics of the liberation struggle, which sought to redress the legacies of apartheid that characterised the pre-crisis period. Increasingly the country has witnessed new forms of political activism, particularly among youth, fostering changes in the discourse with implications for IGFR. First to arise has been the frequent service delivery protests largely a result of dissatisfaction with basic public services at the subnational level, mainly within informal settlements. More recently, university students have protested against tuition fee increases, forcing universities and government to back down on proposed increases. While the immediate fears from a fiscal perspective would be that such activism may create more demands on the budget in coming years, the important point that cannot be dismissed is that these new forms of political activism are beginning to shape IGFR by demonstrating that citizens can indeed demand better governance and accountability at national and subnational levels when it comes to service delivery.

Globally there are also interesting developments. Several countries in sub-Saharan Africa will transition to new political leadership and administrations. For example, a transitional government is supposed to be formed in advance of elections to be held at the end of 2017 in the Democratic Republic of the Congo, while a new administration in Zimbabwe will transition into power in 2018 following national elections. In Latin America, political uncertainties in countries, including Brazil and Venezuela, place a question mark over economic and social stability going forward, with implications for development and foreign direct investment. New political regimes in Asia, such as the Philippines, have bucked convention with new or different approaches to trade and development. Political changes in more advanced economies are also adding to growing uncertainties. Threats of greater isolationism could further slow global trade and economic growth. As a result, the subdued economic outlooks may lend further support to the popularity of anti-integration movements among other advanced economies. Overall the implications of these political changes for domestic growth, trade, and investments, and hence IGFR, remain unclear.

Current forecasts of global economic growth for 2017/18 are slightly positive—after low growth of 2.3% in 2016, growth in 2017 is expected to rise to 2.7%. More recently the International Monetary Fund released its updated growth forecasts for the world, sub-Saharan Africa and South Africa. The forecast growth for the world economy has been revised upwards for the second consecutive time, to 3.5%, from 3.4% previously, while the forecast for 2018 has been left unchanged at 3.6%. Forecasts for growth in advanced economies have been revised upwards by 0.2%, to 2.0% in both 2017 and 2018, from 1.8% previously while forecast growth for sub-Saharan Africa has been reduced by 0.2% for this year and next year, to 2.8% and

3.5% respectively. More relevant to South Africans is the fact that the institution left its forecast for growth in 2017 and 2018 unchanged at 0.8% and 1.6% respectively. Recent events particularly associated with credit ratings downgrades by two of the three leading ratings agencies contribute to the uncertain economic outlook.

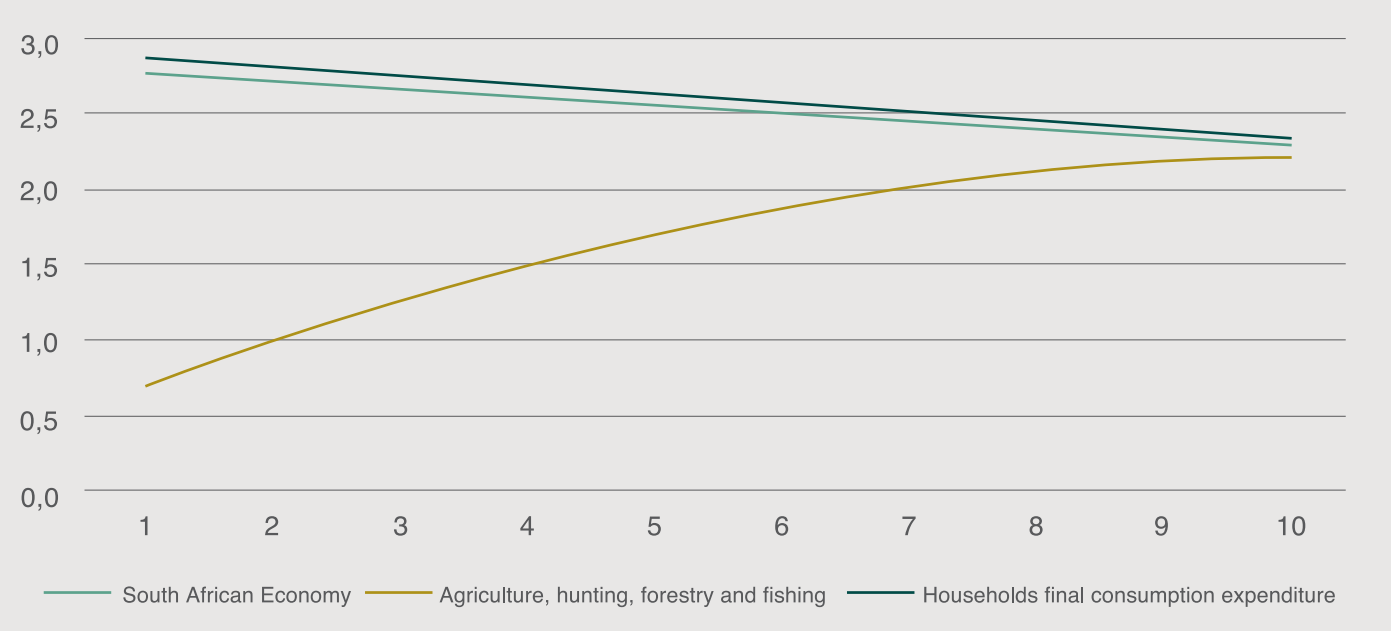
Somewhat counteracting the effects of the credit downgrade are positive developments such as (a) ending of drought conditions and the dramatically positive impact this would have on domestic agricultural growth, (b) Rand appreciation and (c) that the country has addressed the electricity shortage issue which was disabling economic growth. However, whatever positives this may bring is tempered by the significant deterioration in the outlook for fixed investment, especially by the private sector, in the face of a huge decline in business confidence arising from recent developments. Fixed investment declined by 3.9% in 2016, compared with 0.8% growth for private consumption expenditure, 2% growth for government consumption expenditure and an elimination of the previous trade deficit. In other words, it was the decline in capital investment in the face of declining business confidence that was by far the biggest contributor towards low growth of 0.3% recorded in 2016. For both 2017 and 2018, there is unlikely to be a revival in capital investment as the full impact of the damaged business confidence of recent events is felt.

The Commission has extended its main macro-micro model in order to develop prospective scenarios for the coming two decades. A recursive dynamic Computable General Equilibrium (CGE) model is developed to provide a consistent framework to assess the strategic options for growth and development with the following features: (a) separation between urban and rural labour markets and workers for the nine provinces, and among skill categories; (b) treatment of labour force growth and rural-urban migration and remittances; (c) separation between urban and rural representative household groups; (d) demographic growth and its effect on food and non-food demand patterns; (e) imperfect integration of goods markets with the separation between producer and consumer markets for locally produced goods; and (f) treatment of consumption of self-produced and marketed foods. A baseline scenario is developed to project the economy until 2030 in the absence of any major shock or radical shift from the current policy stance. This scenario should not be considered as a projection, but rather as a possible future, from which the impact of alternative policy stances can be evaluated. It does not prejudge the political feasibility of such a future, which may be considered uncertain given the persistent high level of inequalities combined with people's high access to political and judicial instruments to reduce them.

The reference scenario generated by the CGE model laid out a stable economic structure and GDP growth rate that would average 2.3% annually between 2020 and 2030. There is a gradual slowdown of the national economy and households' final consumption expenditures, with increasing growth rate of the agricultural sector, converging towards the national economy average of 2.3% per year (Figure 5). Even with this low growth rate, poverty is slightly reduced and inequalities would marginally narrow. Around 241 000 jobs per annum would be created, which is well below what the country needs if it is to achieve the target unemployment rate of 6% by 2030.5 The fiscal situation would improve over time, creating some space for much needed public investment. With commodity prices declining, the real exchange rate would continue depreciating at 7% per annum to finance imports growing at 2% annually in real terms.

[5] The NDP targets the creation of 11 million new jobs between 2012 and 2030, and reducing the unemployment rate to 6% in 2030. This translates to 600 000 new jobs every year over this period. The 2014–19 Medium Term Strategic Framework target is to decrease the official unemployment rate from 25% in the first quarter of 2013 to 14% in 2020.

Figure 5. Calibrated performance of economy over a 10-year period, annual growth (%)



Source: Commission's calculation based on CGE model simulation results.

A number of alternative scenarios, reflecting a change in the policy stance, have been explored with this model, with a view to measure their benefits and costs from a poverty- and inequality- outcomes perspective. It is hoped that these will contribute to consistently assessing the overall impact of different policy interventions and thus facilitate their prioritisation. The first such scenario is fiscal redistribution. Authorities have repeatedly indicated their intention to use available policy instruments to redistribute resources (including capital ownership) and opportunities (Broad Based Black Economic Empowerment, through public procurement) to disadvantaged groups. South Africa's budget already plays an important redistributive role to reduce inequalities and extreme poverty, and the model is used to explore the impact of amplifying redistribution through greater tax progressivity and/or more generous transfers to the poorest households. Increasing transfers to the poorest households would require selecting a fiscal closure rule, i.e. lower current expenditures, higher fiscal deficit or higher taxation to finance them. As a matter of illustration, doubling transfers (to be financed through higher direct income taxes) to households would increase the real consumption of the bottom 40% by 30.6%, reduce that of the top 60% by 2.8%, and induce a 3.5 percentage points decline in the Gini coefficient. The final consumption effect is more favourable to the rural population compared with the urban population only when the deficit is compensated through the households' income tax. If government extra-expenses are financed primarily by household income tax, the expansionary fiscal policy hurts less agricultural growth and rural consumption compared with non-agricultural growth and urban consumption. Total investment would decline by 0.6%, reflecting the higher propensity of the bottom 40% of households to consume. Impact on relative prices would be marginal.

The second scenario is infrastructure provision. Improved provision of infrastructure would be reflected in a lower cost of service delivery in the medium term, and higher public spending (and related demand for investment goods) in the shorter run. As an illustration, a R52 billion (at 2012 prices) investment in the transport sector would result in increasing (once the project completed) the transport capital stock by 5.6%, thereby lowering transport costs by 1.8%. Combined demand and supply effects would increase GDP and exports by 0.4% and 1.3% respectively. The Gini coefficient would decline by 0.3 percentage points under the influence of three factors: higher direct taxes (mostly borne by the richest households) to finance the investment, lower consumer prices for poor households who devote a larger share of their consumption to transport expenditures, and higher demand for informal labour.

The third and final scenario is agriculture growth implemented as complement to urban development. Agriculture growth has a small effect on national economic performance as its contribution is only 2.5% of total GDP (in 2013). An annual agricultural growth rate of 1.1% on average would positively impact the rest of the economy, i.e. the non-agricultural sector, with one billion additional value added, in constant 2013 Rands. Agricultural growth is pro-rural as households' final consumption increases more for rural households compared to urban households, primarily driven by the price effect. This strategy may well assist with absorbing some of the excess unemployed labour in the rural sector that would otherwise migrate to urban areas in search of jobs.

To conclude, rising income inequality will likely remain a focus in 2018 given its political and social implications. Together with economic and political changes, ongoing conflicts will continue to exacerbate poverty, unemployment and inequality. It appears unlikely that these scenarios will drastically diminish in 2018 leading to national elections in 2019. In the interest of budgetary stability and to address further credit downgrade concerns, the Commission believes the country should continue with the fiscal consolidation.6 Relentless negative domestic factors bring substantial uncertainties and downside risks to the economy. This further indicates the need to rebuild the fiscal buffers that helped to moderate the effects of the 2008/09 recession and gave government the necessary fiscal space to act in a countercyclical manner. As noted in the Commission's past recommendations, successful fiscal consolidation requires deciding which components of the budget will be affected and the pace of fiscal consolidation. The modelling results above also suggest that enhancing rural-urban linkages —through improving policy coordination, undertaking necessary infrastructure investments, strengthening value chains, leveraging intermediate cities, making critical investments in non-urban areas, and promoting productive social protection — can help both rural and urban dwellers.

1.3 Urban Areas in the Spotlight

1.3.1 Towards a definition

For the purposes of this Submission, what constitutes an urban area or urban municipality comes down to focusing on (a) settlement type and (b) the physical attributes of the municipality and municipal area, including the population size, level of urbanisation, size of budget and the local area's economic contribution. The first approach is based on Statistics South Africa's criteria for urban and rural classification based on settlement types. There was a change in the geography types from 2001 to 2011 necessitated by recognition that informal areas are not phenomena only of urban areas as previously assumed in 2001. As a result in 2011 they were omitted as a separate geography type. Three types of geography are distinguished and combined into two settlement types for our present purposes: urban (formal and informal) and rural (traditional and rural). This approach is especially useful in economy-wide modelling, demographic analysis and macro-analysis.

The second approach cascades down to municipal area. Because of the under-developed nature of the subject, this submission draws on previous work7 on differentiating local municipalities (Category B municipalities) into four subcategories. For our purposes, B3 and B4 municipalities have previously been classified as rural and do not qualify. Hence the candidates would be drawn from the three categorisations of metropolitan (A), secondary cities (B1) and large towns (B2). According to the Department of Cooperative Governance (DCOG) a total of 53 municipalities can be classified as urban within this categorisation. This classification is according to National Treasury and Statistics SA's framework whereby urban areas are described as "formal cities and towns characterised by higher population densities, high levels of economic activities and high levels of infrastructure". Urban areas include both formal urban areas and informal urban areas, unlike the 2001 classification when 'informal' was a standalone sector. There are two quasi-official lists that have been relied on for further categorisation and both are by National Treasury. The first list consists of 19 cities selected on the basis of their municipal budget size while the second has 22 cities and emanates from the CSP. The latter includes all provincial capitals that are not governed by a metropolitan municipality. The CSP approach is useful because it considers other variables, such as population and the size of the economy, beyond the municipal budget. This is why it is considered a very useful input for our work.

Other relevant work is that of the South African Cities Network (SACN) in the context of defining secondary cities. The SACN proposes the following criteria for categorising secondary cities:

- Demographics (population size and population density);
- Economic strength (GVA);
- Income levels (personal income and per capita income);
- Public finances (annual total revenue, own revenue and per capita revenue); and
- Employment.

This definition saw the addition of three municipalities to the B1 category, namely Lephalale, Mafikeng and //Khara Hais. These municipalities are categorised as follows by DCOG: Lephalale (B3), Mafikeng (B2) and //Khara Hais (B3). According to the SACN, Lephalale is expected in future to double its current GVA-R due to current investment and economic activity (it holds an estimated 55% of South Africa's coal reserves and the world's largest opencast coal mine at Grootegeluk).

[6] Fiscal consolidation refers to the use of tax increases and/or government spending cuts to reduce government deficits and lower government borrowing.

[7] See, for example, early versions of the Municipal Infrastructure Investment Framework (MIIF). The B1 – B4 categories of local municipalities mentioned in the MIIF were taken through into subsequent government documents such as the Local Government Turnaround Strategy. Secondary cities, under these definitions, are those areas governed by local municipalities that have a significant budget (B1 municipalities).

While Lephalale was classified as a B1 municipality due to economic potential the two other municipalities (Mafikeng and // Khara Hais) were included on the basis that they are 'non-metro' provincial capitals.

The number of metro municipalities (A) was the same in 2006 and 2009 at six. This changed during the 2011 municipal demarcation process when two new metros were introduced taking the number of metros in 2012 to eight. As the increase in metros was because of the upgrading of two B1 municipalities, a reduction of two is reflected in the number of B1 urban municipalities. The number of B2 municipalities has remained stagnant with no new additions or losses from 2006 to 2015. Table 2 shows the distribution of the 53 urban municipalities by province. In total, KwaZulu-Natal and Western Cape contain the highest proportion of urban municipalities (19%). This is followed by Gauteng (15%) and then North West and Mpumalanga (11% each). The least number of urban municipalities is in Northern Cape (2%). Looking at the different categories, Gauteng boasts the highest number of metros, followed by Eastern Cape and then Free State, Western Cape and KwaZulu-Natal with one apiece. There are four provinces without a metro, namely Limpopo, Mpumalanga, Northern Cape and North West. The picture changes somewhat in terms of the distribution of non-metro cities and towns (B1 and B2).

Western Cape and KwaZulu-Natal contain the highest number of B1 and B2 municipalities (nine per province), followed by Mpumalanga and North West with a total of six. Northern Cape has only a single B1 municipality.

Table 2. Distribution of urban municipalities by province

Province	Municipal Category				
	A	B1	B2	Total Urban	%
Eastern Cape	2	0	3	5	9%
Free State	1	1	3	5	9%
Gauteng	3	2	3	8	15%
KwaZulu-Natal	1	3	6	10	19%
Limpopo	0	1	1	2	4%
Mpumalanga	0	4	2	6	11%
Northern Cape	0	1	0	1	2%
North West	0	4	2	6	11%
Western Cape	1	3	6	10	19%
Total	**8**	**19**	**26**	**53**	**100%**

Source: Commission's calculation based on Global Insight data.

As will be demonstrated below, in this sub-categorisation A, B1 and B2s are characterised by large population numbers, high levels of urbanisation, large budgets, fairly consolidated revenue bases and the potential to grow their economies. B2s have interesting own-revenue characteristics, which together with the fact that they have a large town as core, means they can conceivably demonstrate capacity to tackle urban issues. The advantage of this classification is its general acceptance and use, at least within the local government sphere. However a disadvantage is that the classification may be somewhat outdated, having remained largely static over the years, with the only real changes being the 'upgrading' of two secondary cities to metropolitan status.

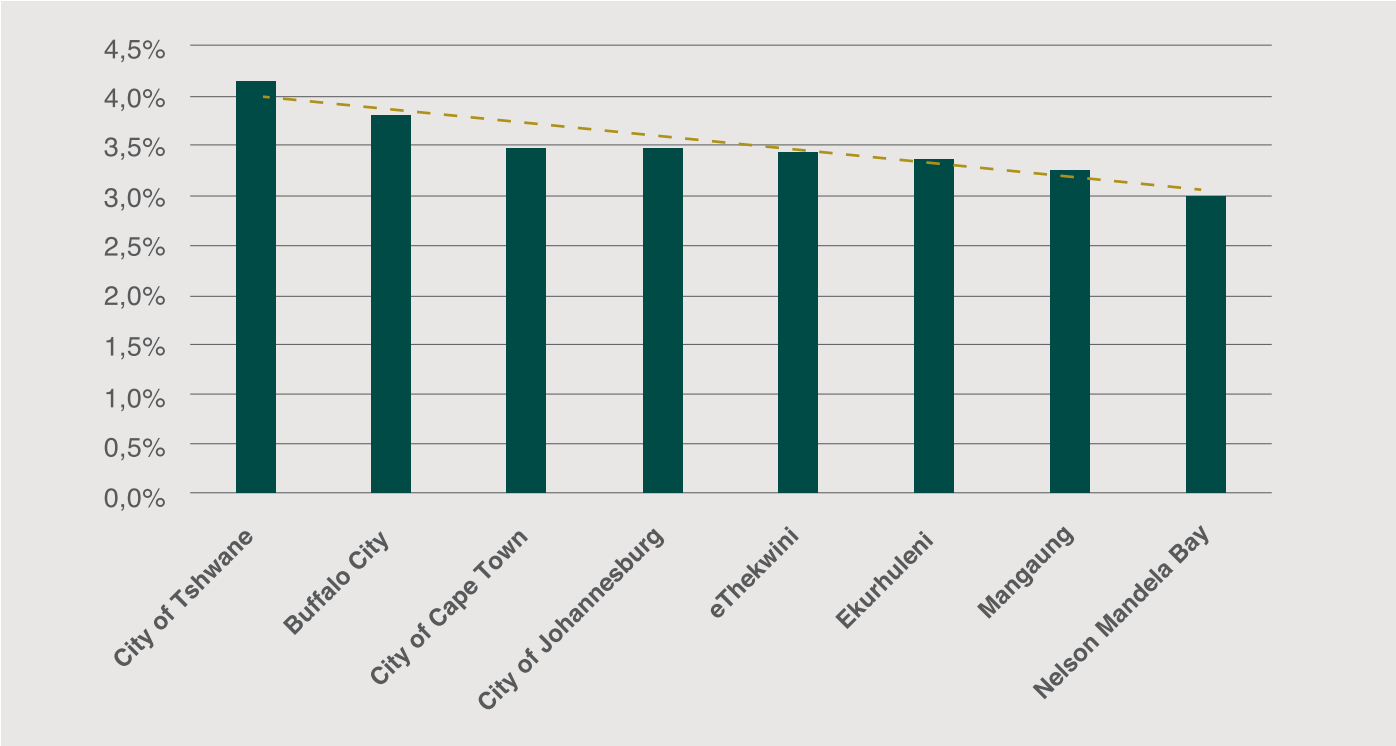
The next important question is: how have urban areas evolved as defined using the municipal categorisation discussed above? The following sections address, this tracking a host of macroeconomic, labour market and wellbeing variables. Macroeconomic parameters are concerned with the aggregate performance of an economy. Performance is measured in terms of the value of production of goods and services, the structure of employment and unemployment, the pattern of consumption expenditures, inequality, poverty and own revenue raising.

1.3.2 Economic growth by urban area

National aggregates tend to mask substantial differences in economic performance across regions. This section isolates economic growth by urban area. Indeed, a characteristic of the development of South Africa's regional economic activity is its spatial unevenness. Different regions experience different rates of economic growth. As economic activity is an important determinant of revenues and expenditures, slow-growing regions will likely see shrinking shares of revenues and expenditures and hence greater pressures to deliver their mandates.

Figure 6 shows growth rates for the eight metros for the period 2004 to 2015. The metros have displayed quite strong growth above, 3% across the board, higher than the national average.

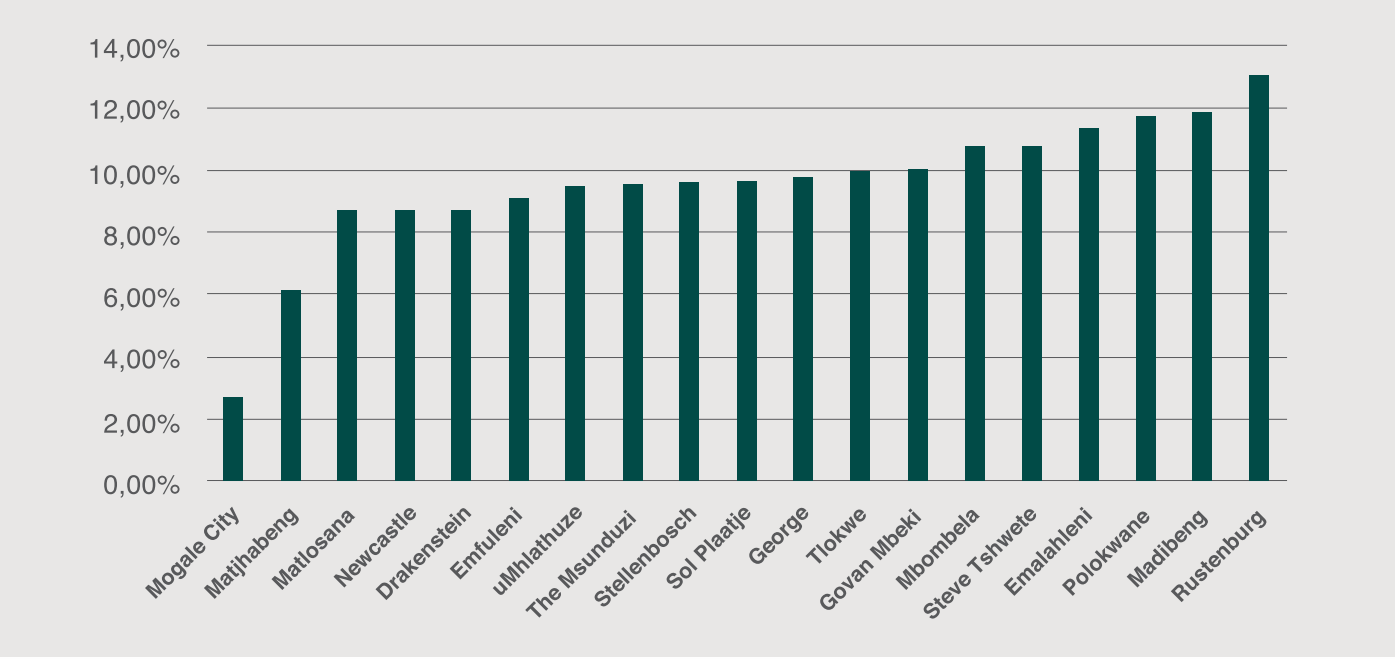
Figure 6. Metro's average growth rate, 2005–2014 (%)



Source: Commission's calculations based on Global Insight Regional Explorer data.

As shown in Figure 7, category B1 municipalities have recorded relatively higher economic growth rates between 1996 and 2015 than metros, growing on average at 9.6%. Within the B1 categories, there is substantial variation with Rustenburg recording the fastest growth (13.02%) while Mogale City could only grow at 2.72%.

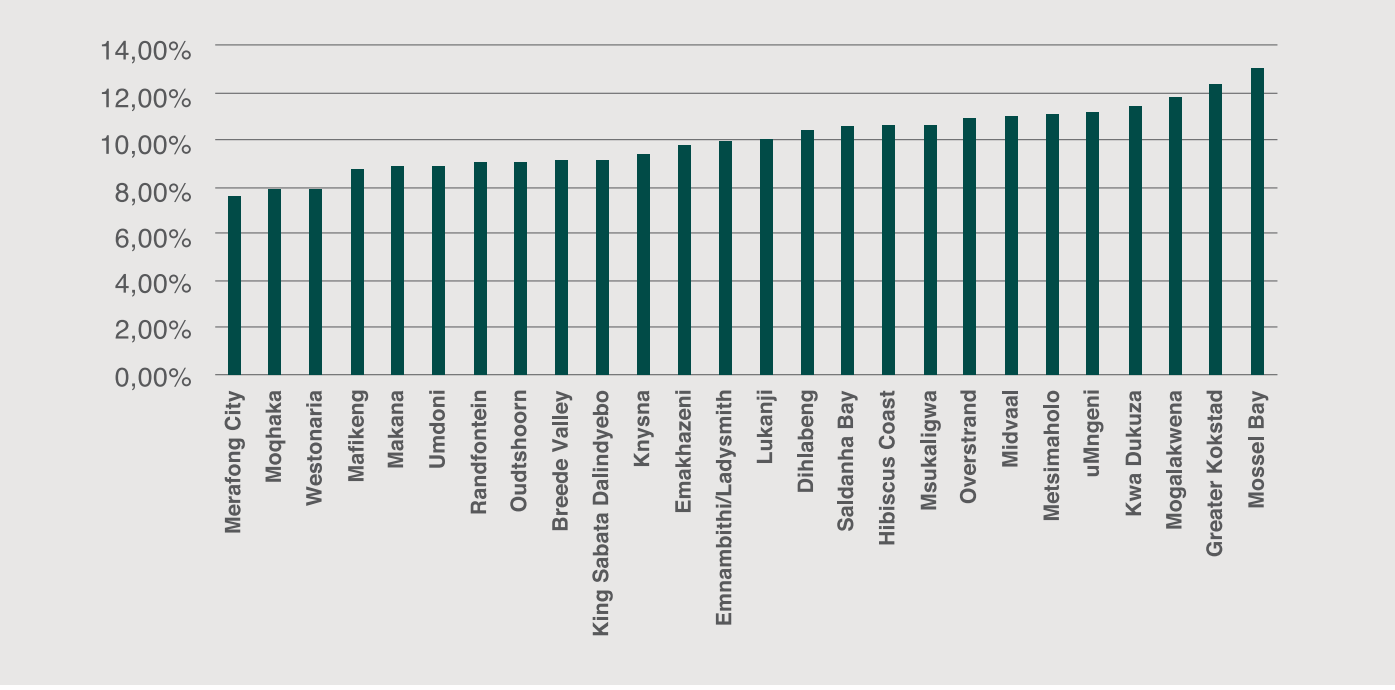
Figure 7. Category B1 municipalities economic growth rate (%)



Source: Commission's calculations based on Global Insight Regional Explorer data.

Figure 8 shows that Category B2 municipalities grew even faster than both metros and B1 municipalities over the period. Their average economic growth rate was 10.07% over the period. Mossel Bay displays the highest growth rate of 13.07% while Merafong grew modestly at 7.6%.

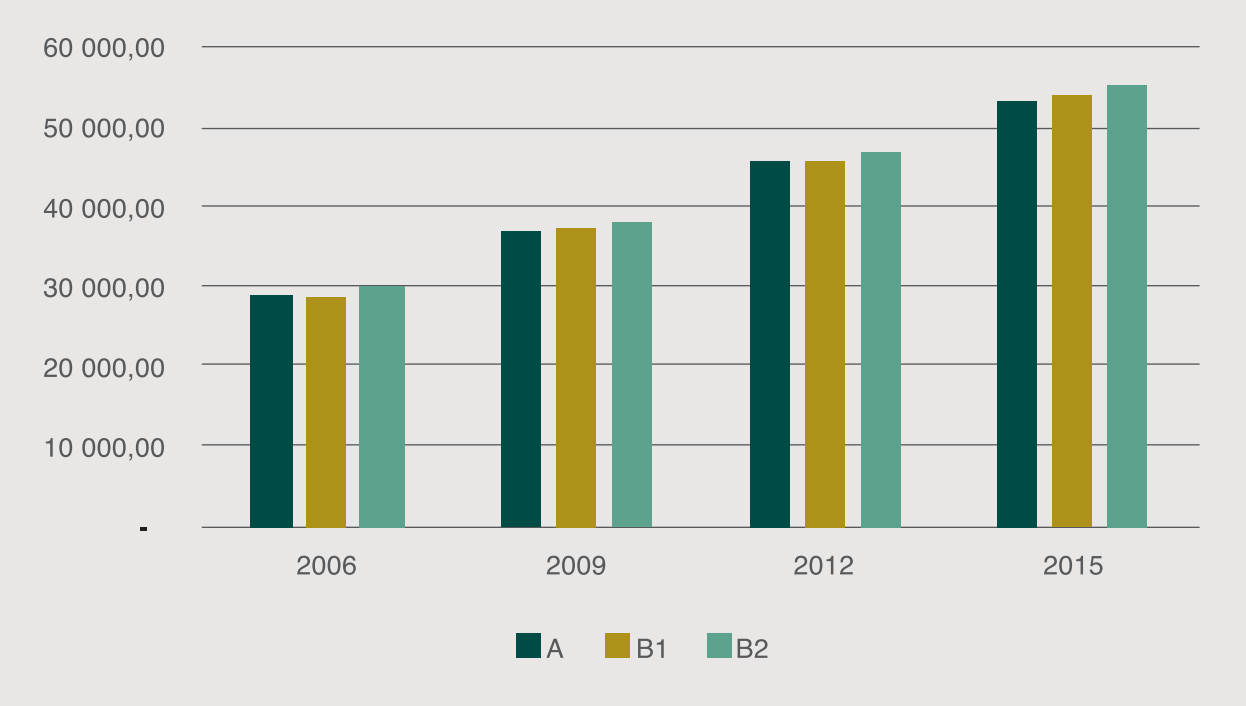
Figure 8. Category B2 municipalities economic growth rate (%)



Source: Commission's calculations based on Global Insight Regional Explorer data.

Figure 9 shows that per capita income has been on a steady increase over the years per municipal category. The interesting part is that the average per capita income for metros is lower than that of the B1 and B2 municipalities. This is due to the fact that the population size of the metros is higher than that of the B1 and B2 municipalities on average. However, as would be expected, per capita income rises over time with urbanisation.

Figure 9. Per capita income by urban municipal category (Rands)



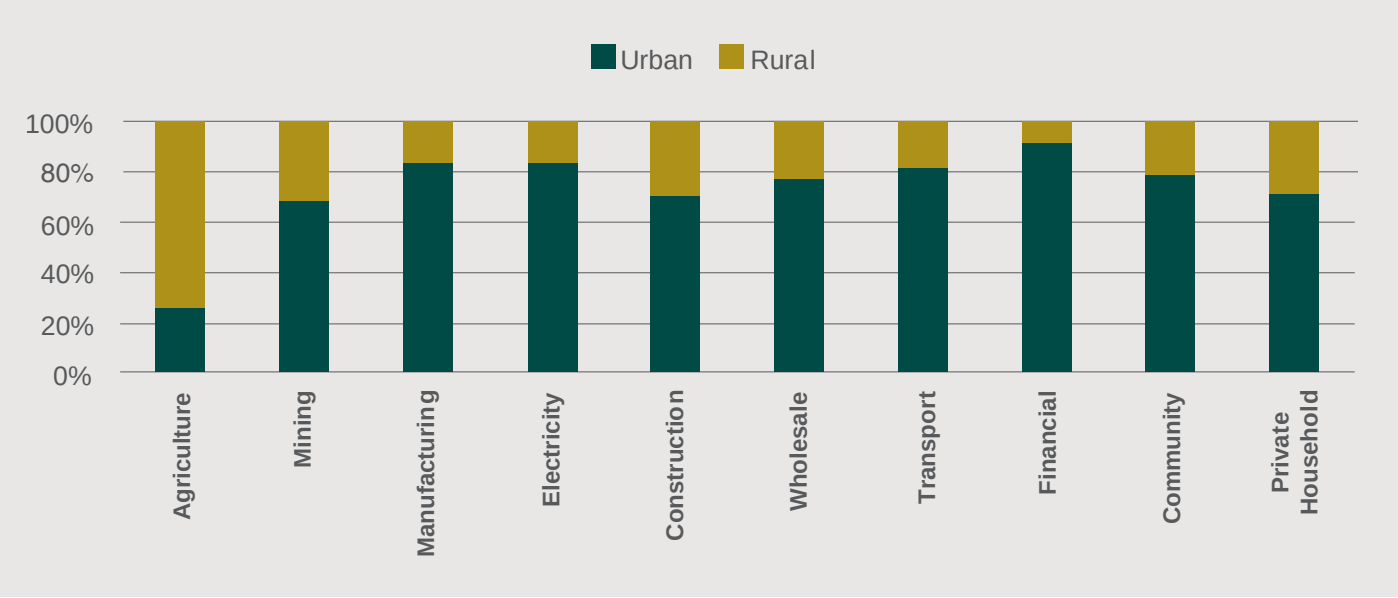
Source: Commission's calculations based on Global Insight Regional Explorer data.

As is the case with many governments across the world, the South African government is searching for new ways to unlock the growth potential of its economy. The analysis above has shown that urban growth has been much higher than the national average. Thus urban areas are key contributors to national growth, and together with subnational governments, the places where citizens and firms create and reap economic benefits. Attention needs to be given to the public policies and public governance arrangements that maximise the performance of each urban area for the benefit of its citizens and the national economy.

1.3.3 The urban workforce and structure

Figure 10 shows the workforce structure across the 30 industries or activities. Unlike the structure of most developing countries, the structure of the workforce is predominantly urban based, with only agriculture being predominantly rural based, according to the employment and income distribution linkages with rural populations.

Figure 10. Urban-rural employment structure by sector, hours worked



Source: Commission's calculations based on 2013 Labour Force Survey.

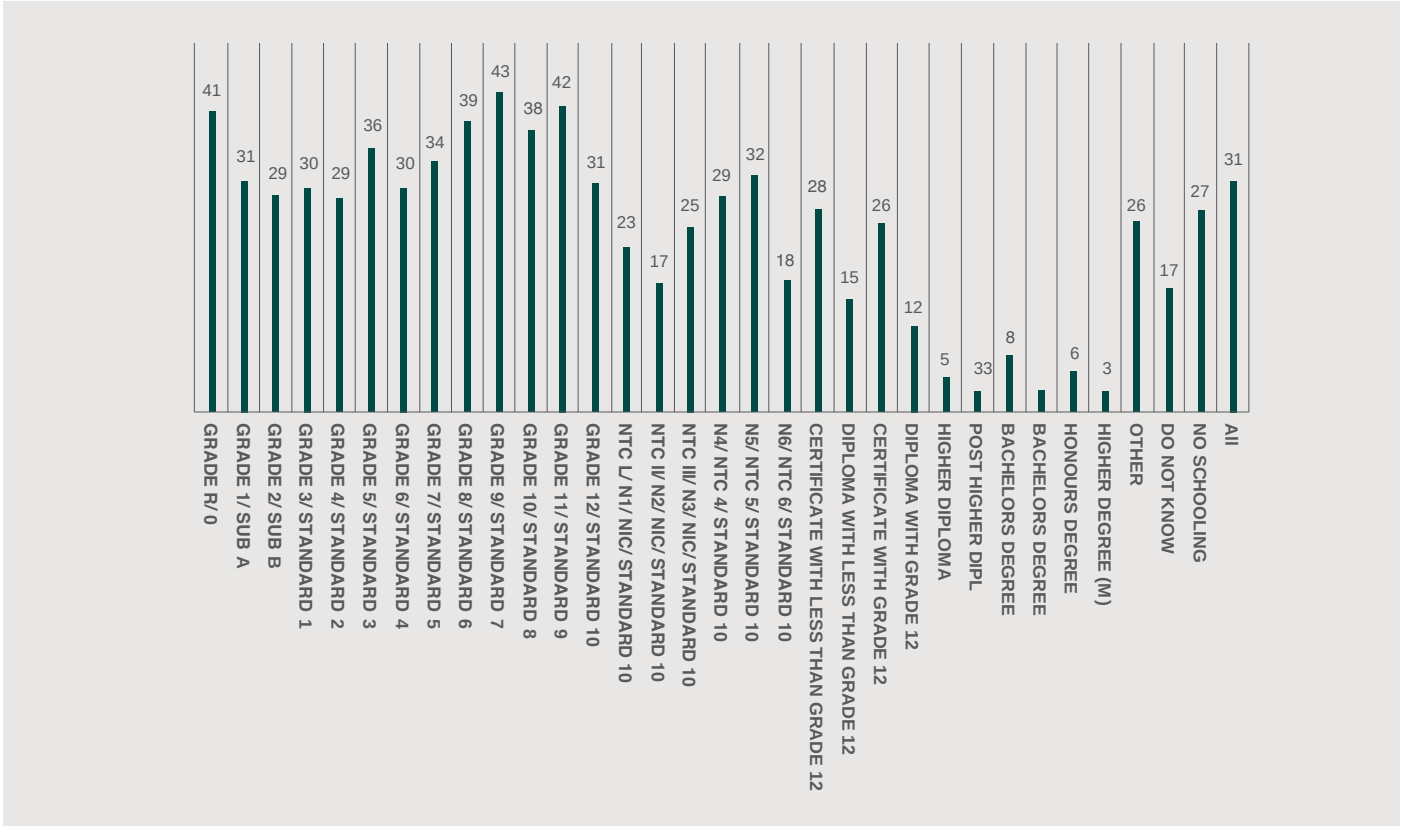
a. Labour Markets

The analysis features 90 categories of worker and labour markets with urban-rural linkage. These are distinguished by province, settlement type and skills as detailed below:

- Provinces (nine): Western Cape, Eastern Cape, Northern Cape, Free State, KwaZulu-Natal, North West, Gauteng, Mpumalanga and Limpopo;
- Settlement types (two): urban (formal and informal) and rural (traditional and rural); and
- Skill categories (five): based on the highest education level achieved, i.e. unskilled (no schooling and less than Grade 1), lower skilled (Grade 2 to 7), medium skilled (Grade 12), skilled (certificate and diploma), high skilled (degree and postgraduate diploma).

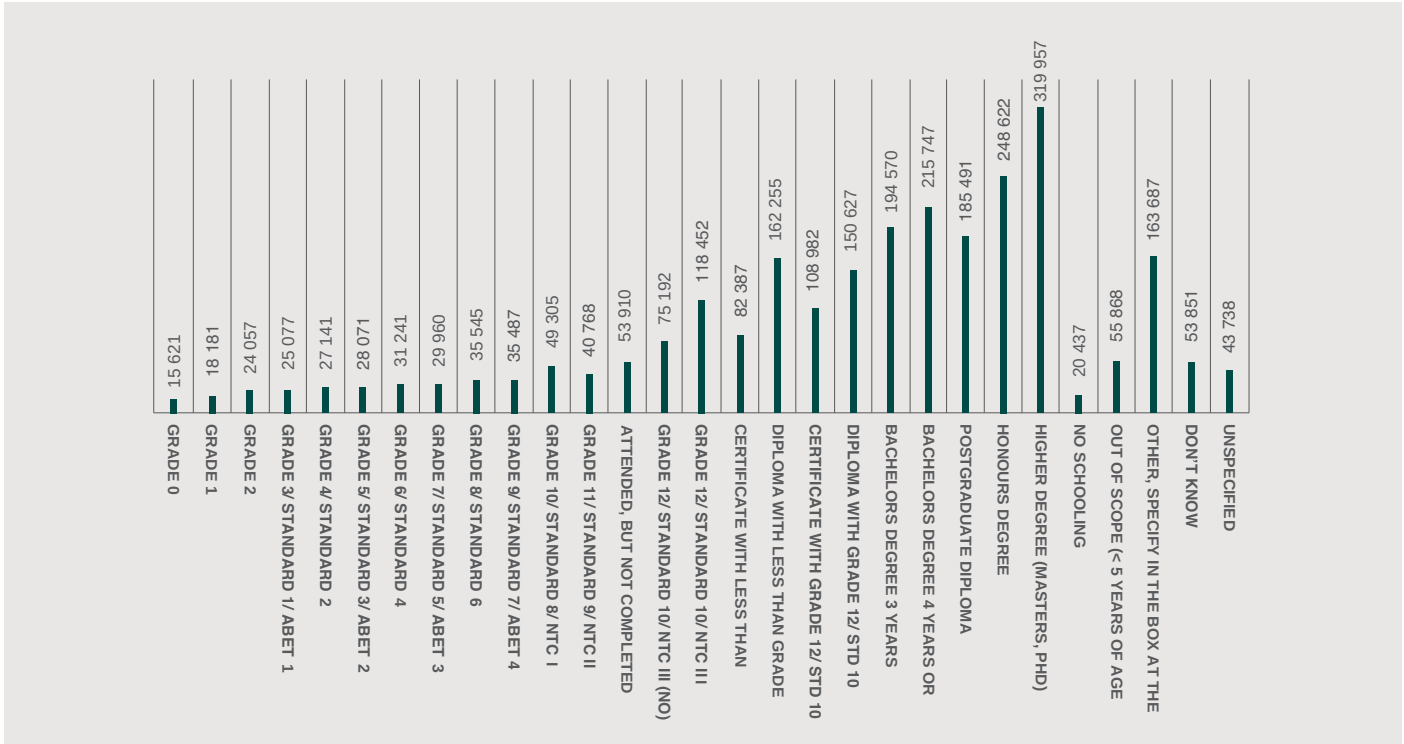
High skilled labour markets show lower unemployment rates and pay higher wages and salaries (Figures 11 and 12).

Figure 11. Unemployment rates by skill category, including discouraged job seekers



Source: Commission's calculations based on 2013 Labour Force Survey.

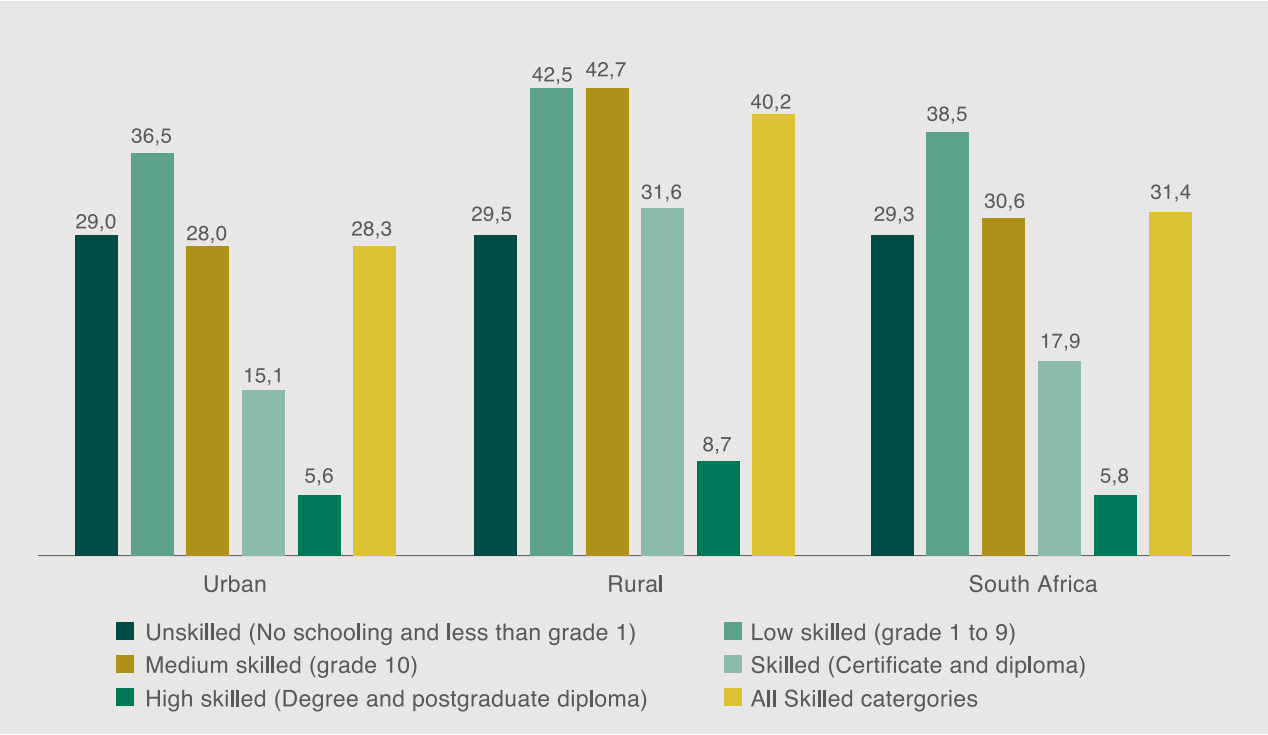
Figure 12. Average salaries and wages by level of education (Rands)



Source: Commission's calculations based on 2013 Labour Force Survey.

The unemployment rate is higher in rural areas as compared to urban areas (Figure 13).

Figure 13. Unemployment rates by skill category, including discouraged job seekers



Source: Commission's calculations based on the 2013 Labour Force Survey.

Table 3 shows a heavy reliance of urban household groups on highly skilled and skilled labour income for all regions while rural households rely predominantly on unskilled and low-skilled labour for all regions.

Table 3. Distribution of labour income by level of education, region and area (%)

Skill Category	Western Cape		Eastern Cape		Northern Cape		Free State		KwaZulu-Natal	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
No schooling and less than Grade 1	1.3	7.5	1.7	7.5	3.4	10.1	2.8	3.5	1.7	7.5
Grade 1 to 9	40.8	60.7	47.8	67.4	41.8	65.3	44.4	68.1	37.7	58.5
Grade 10	36.9	23.9	32.3	16.2	36.6	13.8	32.6	16.8	41.4	24.9
Certificate and diploma	9.2	3.8	10.2	5.9	8.7	6.4	11.0	6.8	10.5	6.8
Degree and postgraduate diploma	11.8	4.0	8.1	3.0	9.5	4.5	9.2	4.8	8.6	2.3
All categories	100	100	100	100	100	100	100	100	100	100

Source: Commission's calculations based on the 2011 Income and Expenditure Survey.

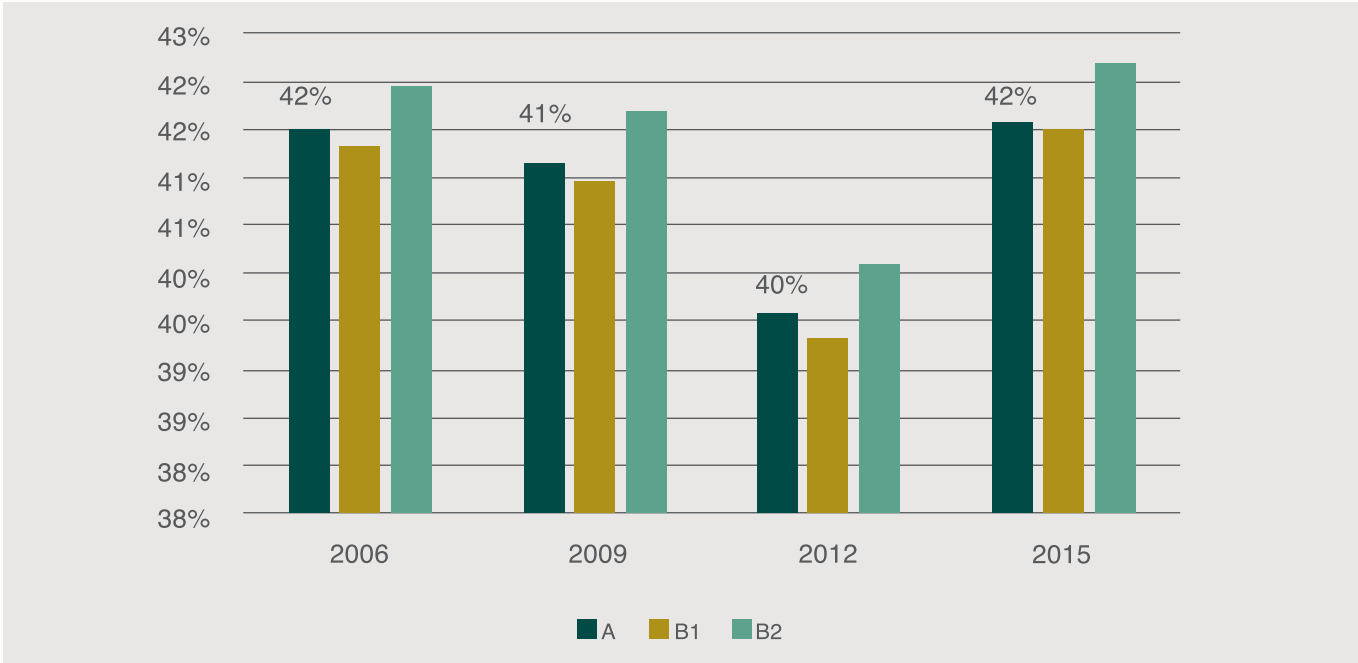
Table 3. Distribution of labour income by level of education, region and area, continued (%)

Skill Category	North West		Gauteng		Mpumalanga		Limpopo		South Africa	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
No schooling and less than Grade 1	4.4	8.1	1.9	6.5	3.2	8.8	2.3	10.8	2.0	8.5
Grade 1 to 9	43.3	59.1	34.1	44.0	41.2	57.0	36.0	60.1	38.4	60.0
Grade 10	37.6	25.6	37.9	30.6	38.1	24.8	32.3	19.5	37.4	22.1
Certificate and diploma	8.9	5.6	14.4	10.0	10.8	7.8	15.4	7.4	11.9	6.8
Degree and postgraduate diploma	5.8	1.6	11.6	9.0	6.7	1.7	14.2	2.1	10.3	2.6
All categories	100	100	100	100	100	100	100	100	100	100

Source: Commission's calculations based on the 2011 Income and Expenditure Survey.

Focusing on urban municipalities, there was a decline in the economically active population growth rate from 2006 to 2012 followed by an increase in 2015 (Figure 14). There is no logical explanation for this pattern as a continuous increase would be expected as people move to urban areas seeking employment opportunities. This same pattern can be seen when the variable is disaggregated by municipal category. It is, however, interesting that economically active population growth is consistently higher in B2 municipalities than in both category A and B1 municipalities, suggesting that B2 municipalities probably serve as the feeder or buffer zone for those economically active and migrating from rural areas before they move to large towns or metros.

Figure 14. Economically active population by urban municipal category (%)



Source: Commission's computations based on Global Insight Regional Explorer data.

1.3.4 Social inclusion in urban municipalities

The unemployment rate declined from 2006 to 2012. After 2012, it started increasing. The decline in the unemployment rate at the beginning of this period was caused by the boom before the world economic crisis. The increase in unemployment rate after 2009 was mainly due to the after-effects of the economic crisis. There was continued increase in formal housing from 2006 to 2015. This can be explained by the fact that more and more formal housing structures are being built by both government and the private sector in line with government's policy of access to basic housing. There is increased economic activity in the trade sector. The urbanisation rate is increasing as people are moving to urban areas for various reasons. The poverty gap is showing a continuous decline in urban areas. This is consistent with national aggregates discussed earlier and importantly suggests that urban areas are an important player in poverty reduction.

Figure 15 shows that the Gini coefficient over time is high but tends to be on a downward trend for A, B1 and B2 municipal categories. The pattern is the same across all the municipal categories, displaying a large decline from 2006 to 2009 but increasing from 2009 to 2012. The coefficient declined from 2012 to 2015.

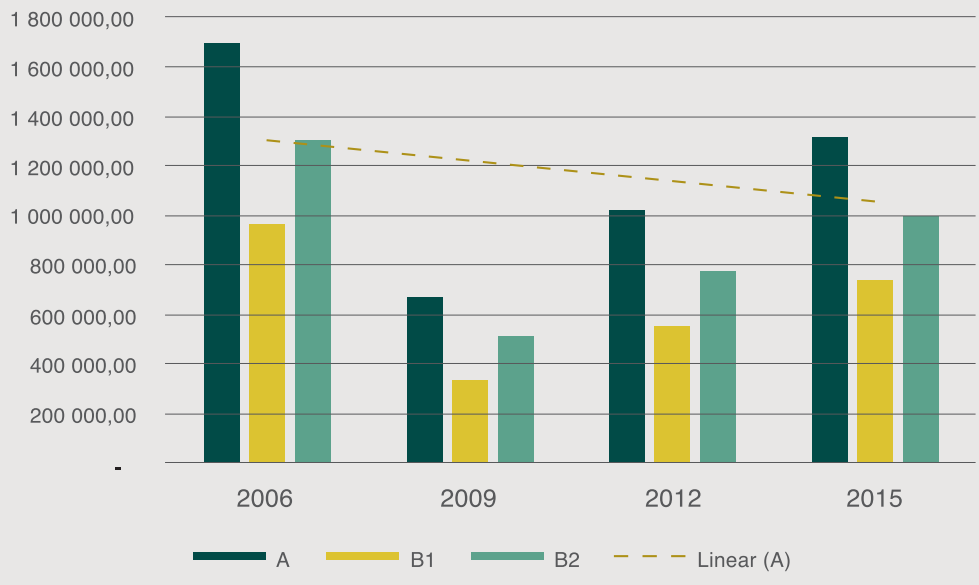
Figure 15. Gini coefficient by urban municipal category

Source: Commission's calculations based on Global Insight Regional Explorer data.

1.3.5 Own revenue by urban municipality type

Figure 16 shows an interesting pattern with regards to average own revenue by municipal category. The average own revenue of B1 municipalities is lower than that of the B2 municipalities. The own revenue in this case constitutes property rates income, service charges and other income. The overall average own income shows a decline from 2006 to 2009 and then increases from 2012 to 2015. Even though the own revenue increased in 2015 it is still below the 2006 own revenue outcomes. The fall in own revenue was due to the 2008 economic crisis that slowed down economic activity. Even though the economy is recovering it has not reached the level it was at in 2006.

Figure 16. Municipal own revenue by urban municipal category



Source: Commission's calculations based on Global Insight Regional Explorer data.

1.4 Institutional Structures for Urban Development

Today, much of the ongoing work in urban policy is aimed at addressing the problems confronting institutions responsible for urban service delivery and development. The IUDF is now government's policy position to guide the future growth and management of urban areas. All of these policies have implications for functions to be assigned to other spheres. The NDP is clear that each sphere of government must improve governance and the execution of their respective powers and functions, while the issue of how powers and functions ought to be managed is an ongoing requirement of the Medium Term Strategic Framework. A useful starting point is the Constitution. South Africa is a unitary decentralised country with three spheres of government, divided into 278[8] municipalities, nine provinces and one national government. Schedule 4 Part A of the Constitution assigns development as a concurrent area of responsibility among provinces, municipalities and national government.

This makes urban development policy complex and transversal, involving different state institutions and agencies that are assigned different aspects of development. National and provincial governments, urban municipalities, state-owned enterprises and the private sector are all involved in urban development initiatives. Table 4 summarises the urban development mandate and funding of the three spheres of government relevant for this study.

[8] The 2015 boundary redeterminations result in a reduction of local government structures by 21 municipalities, from 278 to 257.

Table 4. Mandate and funding of three spheres of government

Government sphere	Constitutional mandate for urban growth and development	Funding
National	• Overall coordination of economic development, industrialisation, stabilisation and distribution. • Economic development.	Taxes, borrowing and duties
Provincial	• Economic: regional planning and development, industrial promotion etc. • Social: education, health, social welfare. • Oversight over sub-provincial governance structures: municipalities, traditional authorities.	Own revenue Provincial equitable share Grants (conditional, indirect and other) No borrowing
Local	• Economic: local planning, infrastructure and services for economic activities: electricity, water, roads, markets, abattoirs, etc. • Social: early childhood development.	Own revenue Local government equitable share Grants (conditional, indirect and other) Borrowing

Source: Commission's compilation.

Policy work underpinning the IUDF by the DCOG has highlighted the importance of taking a more assertive approach to the intergovernmental management of powers and functions with a direct bearing on urban development. For example, the 2008/09 Policy Review on Provincial and Local Government, the 2012 Draft Green Paper on Cooperative Governance, the 2013 Draft Framework for the Assignment of Powers and Functions: a framework for differentiation, and Strengthened District Governance (2014) all coalesce in a definition of roles and responsibilities in the IUDF. Current delegations, or responsibility for important aspects of urban development are provided for in chapter 3 of the IUDF Implementation Plan for 2016–2019, which assigns roles to each sphere of government through the system of intergovernmental relations and in congruence with the Constitution. The chapter bestows functional responsibility for urban development on the three spheres of government as set out below:

- **National government.** The setting up of the National Planning Commission marked a major milestone for planning in South Africa. In 2012 the NDP was presented, introducing spatial planning, in combination with urban plans, for adoption by the whole of government. Led by DCOG and with the Department of Planning, Monitoring and Evaluation, National Treasury and relevant sector departments, national government is responsible for providing policy direction and support, reviewing and expanding the legislative framework, providing and revising regulations, monitoring the performance of both provincial and local government and supporting capacity development. National government is also tasked with consolidating support to urbanised and rapidly urbanising municipalities with relevant programmes such as the Cities Support Programme (CSP) being upscaled and broadened. Various line departments and agencies, such as the departments of Public Works, Transport and Human Settlements are implementing urban-related programmes and projects.
- **Provincial government.** The provincial government's role is to provide guidance through long- and short-term growth and development strategies; amend, expand or develop provincial legislation; monitor the performance of local government and be the implementing agent in some cases. Provincial governments are also responsible for capacity support and development for local government.
- **Local government.** Local government is required to consolidate existing plans and develop viable long-term growth and development plans and integrated development plans. It is also responsible for infrastructure investment, and in many instances acts as the primary implementer of services that are critical for the success of the IUDF, ensuring alignment and coordination through regulatory functions around local policies and by-laws.

Within the existing structure there is no distinct, major body which is responsible for all facets of urban development in the country. While various departments and agencies have certain urban-related functions, these are either limited or applied within the context of specific policies rather than for urban development. A realignment of functions and coordination across various spheres, agencies and departments needs to be proposed.

1.5 Summary and Recommendations

This chapter sets the scene for the remainder of the Submission by providing an empirical context for strategic options for growth and urban development. Following an economic and fiscal outlook, the chapter builds a model to provide a consistent framework to explore possible medium-term developments, based on the main structural features of the economy. A baseline scenario is developed to project the economy until 2030 in the absence of any major shock or radical shift from the current policy stance. A number of alternative scenarios, reflecting a change in the policy stance, are then explored with this model, with a view to measure their benefits and costs from a poverty and inequality outcomes perspective. The final part of the chapter puts urban development in the spotlight, providing a definition of what is meant by urban in the Submission, as well as vital background data and characteristics profiling urban areas. Below is the list of strategic recommendations flowing from the chapter analysis:

With respect to strategic options for rapid urbanisation to enable faster, more inclusive and sustainable economic growth, the Commission recommends that:

1. Over the medium term, government should continue with a gradual programme of fiscal consolidation that entails reducing the budget deficit moderately but consistently. Such efforts to preserve fiscal sustainability must continue in the future, even with the addition of longer-term programmes such as the National Health Insurance.
2. Government should actively and specifically continue pursuing the implementation of significant capital investment in public infrastructure that has a positive impact on total factor productivity and employment in the context of the National Development Plan.
3. National government should develop and promote the development of urban-rural relations by:
    a. Strengthening rural-urban linkages and policy coordination between rural and urban spaces;
    b. Ensuring rural infrastructure investments are better targeted;
    c. Promoting productive social safety nets; and
    d. Providing incentives to encourage new industries and businesses in rural areas as a strategy to decongest urban areas.

FINANCIAL AND FISCAL COMMISSION

For an Equitable Sharing *of National Revenue*

Chapter 2:

Assessment of Intergrated Urban Development Framework and Cities Support Programme

Chapter 2: Assessment of Integrated Urban Development Framework and Cities Support Programme

2.1 Introduction

Post-1994, government has introduced numerous policies driven by the urgent need to address inequality and the injustices of the past. In spite of the many years of resolute post-apartheid urban development, the harrowing fact is that the imprint of apartheid spatial geography is still evident in cities as they remain segregated, fragmented and unequal.

In recent times, national government has responded to these challenges with a suite of policies and programmes. For example, National Treasury has championed the Cities Support Programme (CSP) since 2012, while the Department of Cooperative Governance and Traditional Affairs (COGTA) coordinates the Integrated Urban Development Framework (IUDF) approved by Cabinet in 2016.[9] As discussed in chapter 1, notwithstanding these ongoing efforts, the country faces rapid urbanisation, urban inequality and urban poverty. The question then becomes whether these urban policies, planning processes and practices represent a sound and adequate response to urbanisation challenges at the level of metropolitan cities. Several research questions follow from this overarching policy question including:

- How do the CSP and IUDF approach the problems associated with rapid urbanisation and apartheid spatial geography?
- Are these policies consistent, or mutually supportive of one another in dealing with the challenges at hand?
- How should these policies be funded? and
- Are fiscal instruments best deployed to advance these policies, or how can they be effectively deployed?

The purpose of this chapter is to assess previous and current policies in as far as they have responded to or will respond to the urbanisation challenges. The objectives are to:

- Assess the key principles or intent of South Africa's urban development policies (in particular whether these policies represent an appropriate response to on-going changes in urban form and population growth);
- Examine how the previous and current urban development policies have been coordinated amongst the three spheres of government; and
- Assess the alignment of funding for these urban development policies.

2.2 Research Methods

The study uses a combination of ex-post and ex-ante assessment methods.[10] The ex-post assessment is applied predominantly to programmes that have been in existence for a long time while the ex-ante assessment is used in cases where implementation is in progress. Key to an efficient, effective and coherent policy cycle is that the ex-ante and ex-post components of evaluation are linked (Mergaert and Minto, 2015: 47). Furthermore, the use of knowledge gained through ex-post evaluations in ex-ante evaluations is a crucial link in the policy cycle, as such evidence informs policy making and contributes to policy learning as part of effective governance (Mergaert and Minto, 2015: 48). The assessment of urban development policy requires an explicit framework with classified criteria. Cook et al. (2011) cited in Mamouney and Coffey (2015: 9) identifies six types of analysis, namely institutional, policy analysis/argument, qualitative description, qualitative content analysis, numerical description, and statistical analysis. This chapter has adopted Mamouney and Coffey's criteria for policy analysis.

Both primary and secondary data are used. The secondary data consisted of financial information while primary data was collected through interviews aimed at augmenting the secondary data. Interviews were conducted with National Treasury, COGTA, South African Cities Network, eThekwini Municipality, City of Johannesburg, Nelson Mandela Bay Municipality and City of Tshwane. The questionnaire used was tailored for the various categories of respondents.

[9] These two policies were preceded by the Neighbourhood Development Programme and Urban Development Framework (UDF).
[10] The results of ex-post analysis are contrasted with the results of ex-ante to understand the factors determining the success or failure of policies implemented.

2.3 Findings and Discussion

2.3.1 Ex-ante and ex-post assessment of urban policies

Figure 17 portrays the sequencing of the four polices that are the key focus of this study. The Urban Development Framework (UDF) published in 1997 noted that urban areas are very important for economic and social development. It envisioned more efficient and productive cities and towns through the growth of local economies and also outlined the need for compaction and coherent spatial development of urban areas. The Neighbourhood Development Programme was established in 2006 to manage the Neighbourhood Development Partnership Grant. It provides a medium- to long-term funding commitment to municipalities for township and small town development. The CSP is an "initiative of National Treasury introduced in 2012, aimed at providing implementation support to South African cities, specifically around human settlements, public transport, economic development, and climate resilience and sustainability" (Sitas, 2016). It is a coordinated platform for implementation support to cities. The IUDF seeks to foster a shared understanding across government and society about how best to manage urbanisation and achieve the goals of economic development, job creation and improved living conditions for the people.

Figure 17. Sequence of ex-post and ex-ante urban development policies

Source: Commission compilation.

Table 5 outlines the matrix used in assessing the urban development policies. This matrix presents a synopsis of the findings with regards to the content (intervention approach and intent), coordination and funding for the assessed policies. The table shows that although the UDF may have had good intentions, drawbacks were a lack of proper coordination, an implementation plan and specific funding. The programmes which were implemented after the UDF, showed an improvement on the UDF's deficiencies of coordination, funding and implementation. The IUDF took lessons from the failures of the UDF and also benefited from the successes of the two other programmes. However, the IUDF itself does not have specific funding, hence its success is dependent on strengthened coordination and monitoring of the implementation plan. A detailed analysis of each policy is articulated in the next section.

Table 5. Urban development policies assessment matrix

Assessment Indicator	UDF	NDevPrg[1]	CSP	IUDF
The policy permits/does not inhibit urban migration.	✓	✓	✓	✓
The policy focuses on rapid urbanisation.	✓	✓	✓	✓
The policy focuses on addressing urban inequality.	✓	✓	✓	✓
The policy focuses on addressing urban poverty.	✓	✓	✓	✓
The policy has an implementation plan/approach.	✓	✓	✓	✓
The policy has coordination mechanism/s.	x	✓	✓	✓
The policy has specific funding.	x	✓	✓	x
The policy funding has been well configured.	x	✓	✓	x

[1] NDevPrg is the Neighbourhood Development Policy.

Source: Commission compilation.

2.3.2 Ex-post assessment of the UDF

Table 5 has shown that on paper the UDF had intentions to deal with rapid urbanisation, urban poverty and inequality. However, the UDF suffered from inconsistency in its championing and coordination, following the closure of the RDP office in the 1990s[11], which created a void. As a result, achieving real coordination across sectors was a challenge given the complex array of institutions involved. This also created a vacuum for sectoral government departments to ascertain whether their spatial strategies were aligned with one another or not. Consequently, cross-cutting policy aspirations were overtaken by narrow sectoral priorities of government departments. Turok and Parnell (2009: 165) argue that the UDF had little impact on the work of national ministries.

As the UDF lacked a specific funding instrument and implementation plan sector departments spent their budgets based on their own spatial principles. Housing-driven settlement planning resulted in houses that tended to be built on isolated land on the edge of cities. With no influential national urban policy, building on peripheral land reproduced spatial segregation and imposed high transport costs on the poor.

2.3.3 Ex-post assessment of the Neighbourhood Development Programme

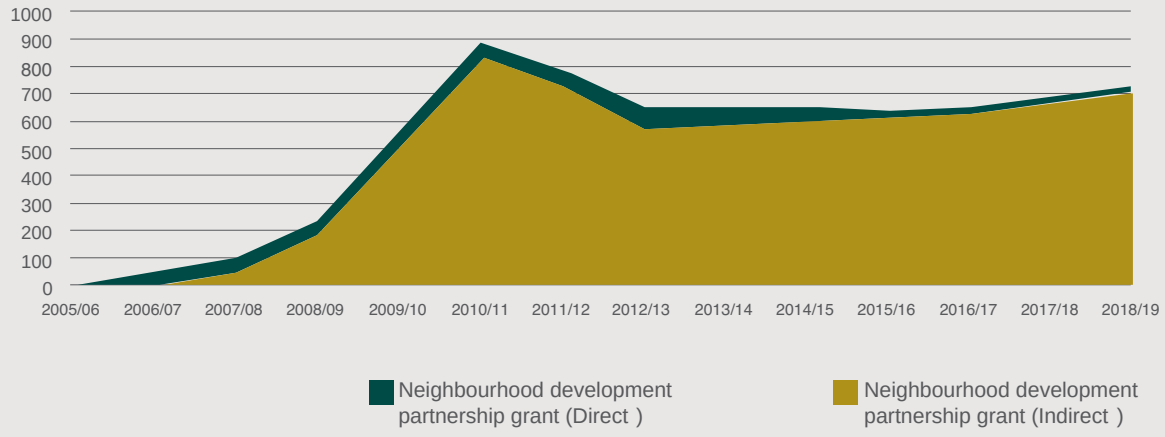
This programme, and its associated grant, focusses on revitalising areas that are characterised by (amongst others) low household income and high levels of poverty. As shown in Table 5, the Neighbourhood Development Programme is intended to deal with rapid urbanisation, urban poverty and inequality, through a programmatic approach that is spatially focused. Focusing on townships (under-developed residential areas) aims to redress the imbalances of the past which neglected some residential areas. The Neighbourhood Development Programme focus is well justified according to Mahajan (2014: 8) who argues that much of the urban population growth has been in the former black townships and in particular informal settlements. The inability to invest in the townships means a lack of economic opportunities and growth close to where people live. Therefore, the Neighbourhood Development Programme's deliberate intervention to revitalise formerly marginalised locations is important.

The Neighbourhood Development Programme is properly coordinated and focusses on integrated delivery achieved through and with partners. It acknowledges that development occurs in the local government space and jurisdiction. This is evident as the Neighbourhood Development Programme continuously aligns its projects with cities' plans, specifically the Integrated Development Plan (IDP) which is the principal development document for municipalities. Further, the Neighbourhood Development Programme criteria requires that there must be council support, submission must be done by the municipality and projects must be aligned with the IDP.

Funding is key in ensuring that plans get implemented and objectives are ultimately achieved. Figure 18 illustrates how the programme funding has been allocated since 2005/06 to 2018/19. It is clear that the indirect grant is increasing from 2013/14 and the succeeding years. Following evaluation, the Urban Network Strategy (UNS) was introduced providing a systematic approach to leveraging private sector investment in strategic locations through a coordinated set of spatially targeted interventions. Leveraging private sector investment is very important given the current tight fiscal environment.

11 The UDF coordination moved to the former department of Housing and in 2000 the responsibility for the UDF shifted to "the former", Department of Provincial and Local Government.

Figure 18. Neighbourhood Development Partnership Grant allocation (Rand Millions)



Source: Commission compilation based on various National Treasury Budget Reviews.

2.3.4 Ex-post assessment of CSP

Table 5 showed that the CSP has a strong coordination element, as the programme works with national government to shift policy in a way that makes it easier for cities to work more efficiently, while working with cities to ensure economic growth and a reduction in poverty. The Neighbourhood Development Partnership Programme has the most complementary vision with the CSP on spatial targeting or aligning spatial planning with public finance. There is further alignment as the CSP has also adopted UNS and the programme has proper mechanisms for aligning with cities' key plans. The UNS underpins the development of the Built Environment Performance Plans (BEPPs) prepared by cities. BEPPs provide an important link between the IDPs and SDFs, and also the medium-term revenue and expenditure frameworks. There are also forums for engagement with stakeholders such as City Budget Forums, Partners Forum and Departments Forum.

There is a clear funding approach for the CSP through the budget process. The CSP plays a coordinating role in the framework of grant allocations to metros to bring alignment and coherence, and supports the design and management of these grants by the relevant transferring officers. Its operational budget is funded on the National Treasury vote (Programme 8), which provides in-kind technical assistance to participating cities. As this has been fairly effective, it has started to leverage significant donor contributions, either through projects they support aligning within the CSP framework or through financial contributions.

2.3.5 Ex-ante assessment of IUDF

Despite the urban development policies that have been introduced, the country is still confronted with rapid urbanisation, urban inequality and urban poverty (amongst others). Learning from the UDF experiences, the IUDF focuses on the core urban development issues emphasising (a) integrated urban planning that forms the basis for achieving integrated urban development, which follows a specific sequence of urban policy actions (b) integrated transport that informs (c) targeted investments into integrated human settlements, underpinned by (d) integrated infrastructure network systems and (e) efficient land governance and management, which all together can trigger (f) economic diversification and inclusion, and (g) empowered communities.

Taking lessons from the UDF which suffered inconsistencies in coordination and also lacked implementation, the IUDF process of preparation was more inclusive and consultative. Table 5 showed that the IUDF has a clear coordination mechanism. To ensure implementation, the IUDF has identified coordination structures and also acknowledges that the DCOG is the department responsible for integrated urban development and thus for collaborating with other stakeholders (to ensure that the identified activities in the implementation plan are undertaken, to monitor the implementation and to review both the framework and the implementation plan).

The IUDF is an over-arching and multi-sectoral framework. However, it does not have a specific funding instrument, hence its successful implementation is dependent on various actors. As such, a lack of firm coordination poses risks to its implementation. Learning from the UDF deficiencies, the IUDF recognises that intergovernmental relations need to be strengthened "to drive the agreed policy, fiscal and regulatory changes, and to steer the priorities of the urban agenda" (COGTA, 2016: 101). Furthermore unlike the UDF, the IUDF has an implementation plan, so chances of better implementation are higher. Coming after other programmes the IUDF has a foundation to build from as several lessons have been learnt that should lead to more effective implementation.

2.4 Summary and Recommendations

Notwithstanding the policies on urban development, cities are still confronted with rapid urbanisation, urban poverty and inequality. It is clear that programme-based approaches and piecemeal efforts in small precincts help locally, but will not turn the tide in favour of systematic spatial transformation. Therefore government should embrace a systems approach rather than a projects approach. Fiscal instruments need to be streamlined to respond to the integrated nature of development and spatial transformation. There is also a need to move away from the traditional 'silo' approach to intergovernmental relations in order to better drive the spatial development agenda._

With respect to strengthening the Integrated Urban Development Framework as well as the Cities Support Programme for positive impact on urban development, the Commission recommends that:

1. The Department of Cooperative Governance and Traditional Affairs and Department of Planning, Monitoring and Evaluation continue strengthening coordination and monitoring mechanisms (by ensuring that departmental sector plans and strategic investments are aligned to local spatial plans and priorities) and coherent with national objectives espoused in the Integrated Urban Development Framework.

2. The Department of Cooperative Governance and Traditional Affairs and National Treasury consolidate the urban development related grants (for example incorporate the Integrated City Development Grant into the Urban Settlement Development Grant) so as to achieve the Integrated Urban Development Framework objectives and address urban development holistically.


FINANCIAL
AND FISCAL
COMMISSION
For an Equitable Sharing
of National Revenue

FINANCIAL
AND FISCAL
COMMISSION

For an Equitable Sharing
of National Revenue

Chapter 3:

Compact Cities – An Evaluation of Legislation and Policies

Chapter 3: Compact Cities – An Evaluation of Legislation and Policies

3.1 Introduction

The Financial and Fiscal Commission made a recommendation in 2011 that South Africa needed to pursue the development of a compact city form as this urban form is likely to have social, economic and environmental benefits. The Commission noted that the benefits of a more compact urban form included lower costs and expenditures by households, a reduction in public infrastructure investment requirements, smaller public transport subsidies, and less carbon emissions. The National Development Plan's Vision 2030 also supports the "breaking down of apartheid geography" through, among other things, developing more compact cities. One of the ten critical actions contained in the NDP is the need for "new spatial norms and standards – densifying cities, improving transport, locating jobs where people live, upgrading informal settlements and fixing housing market gaps". The plan proposes a national focus on spatial transformation across all geographic scales with policies and instruments to reduce travel distances and costs, especially for poor households. Importantly, this vision for South Africa's urban areas recognises that the country has different types of cities and towns, which have different roles and requirements which should be pursued in differentiated and locally relevant ways.

The idea of retrofitting existing city footprints to produce compact, coordinated and connected cities has also found traction in the recently launched Integrated Urban Development Framework. The idea of creating compact South African cities is, however, not new. Since democracy, an abundance of policies and frameworks have been developed promoting the role and potential of more compact and spatially-efficient cities. The Reconstruction and Development Programme of 1994, the Development Facilitation Act of 1995, the Urban Development Framework of 1997, the Spatial Development Framework (SDF), integrated zoning schemes, several white papers and other government policy statements support the need for compact cities. The Development Facilitation Act was the first piece of legislation post-apartheid that made reference to compaction, and was passed to correct the ills of apartheid geography characterised by unequal and fragmented planning systems. In June 2010, however, the Constitutional Court ruled that certain provisions of this Act were unconstitutional and invalid, and it was replaced with the Spatial Planning and Land Use Management Act (SPLUMA) in 2013.

In 1998, the National Environmental Management Act (NEMA) was adopted as overarching environmental legislation applicable to all organs of state. NEMA establishes environmental sustainability as one of the pillars of spatial transformation. The Municipal Systems Act legislated that the SDF should be an integral component of a municipality's Integrated Development Plan (IDP) as discussed in Chapter 2 of this Submission. For the first time spatial planning was elevated to municipal-wide planning taking into account the existing conditions and resources available for development. In 2003 the first National Spatial Development Perspective (NSDP) was approved by Cabinet and later revised in 2006. Other legislation that supports compact city development is the Infrastructure Development Act of 2014, which includes the concept of Strategic Integrated Projects (SIPs), these were first introduced in the National Infrastructure Development Plan of 2012. This legislation is important to spatial planning as it involves major interventions in the spatial form and economic development of areas. The Act is prescriptive in terms of the priority of the SIPS over strategic spatial planning and land use management.

Despite all this array of policies espousing the virtues of compact cities, urbanisation in South Africa is still characterised by sprawling cities. Against this backdrop, this chapter addresses the question: are city policies, spatial plans and regulations responding to the call for compact cities and city regions?

The main objective of the chapter is to assess the current policies and institutional arrangements supporting the creation of compact cities; determine whether policies are consistent, mutually supportive and aligned to the spatial development agenda of the city; and evaluate the incentives, grants and other fiscal instruments designed to support compaction. The main research question is "what are the current regulations, institutional arrangements and policies on urban compaction and what incentives are there to advance compaction?" This is further disaggregated as follows:

- How do city policies and regulations on planning approach the problem of compaction?
- Are the policies consistent and mutually supportive and is there city buy-in?
- How are, or will, the policies be funded? i.e. if the policies are clear enough, how can the fiscal instruments available be used to advance the policies?

The scope was limited to metropolitan municipalities in order to draw specific and direct conclusions about compaction in South Africa's cities. The metros interviewed for the research were Nelson Mandela Bay Municipality, the City of Johannesburg, the City of Tshwane and the City of Ekurhuleni.

3.2 Research Methods

In seeking to review whether city policies respond to compaction objectives in metropolitan municipalities, the study employed a three-pronged approach as follows:

(i) Compaction policy reviews – the review was done using content analysis in the form of a four-component approach (customised to compaction) proposed by Heidrich et al. (2013) as depicted in Table 6.

Table 6. Policy content analysis framework

Measurement objective	Indicator guide
Information Base	• Does the policy contain data/statements/analyses that show awareness of compaction?
Vision and Objectives	• Are wthere objectives associated with the development and enhancement of compaction?
Implementation	• Do the implementation provisions include reference to compaction measures?
Incentives and Disincentives	• Are there incentives and disincentives to promote or discourage compaction or sprawl?

Source: Heidrich et al. (2013).

(ii) Case studies – through face-to-face and focus group interviews, relevant personnel from metropolitan municipalities were interviewed to validate whether compaction has taken place or not and to uncover the constraints to compaction.

(iii) Focus-group and face-to-face interviews – whether compaction policies are consistent and mutually supportive, and the availability of funding mechanisms in support of compaction policies were addressed through focus group interviews with city planning personnel from the City of Johannesburg, the City of Ekurhuleni, the City of Tshwane, and Nelson Mandela Bay Municipality.

Nine officials from the four metros were interviewed using a semi-structured questionnaire as depicted in Table 7. The questionnaire was constructed around the following themes:

(i) The extent of sprawl in metropolitan municipalities – determining the metro's definition and understanding of urban sprawl, its extent in the city, and whether sprawl is considered an issue or not.

(ii) Spatial, land ownership and socio-economic arrangements in the city – uncovering the spatial instruments and socio-economic arrangements currently in place in order to achieve densification.

(iii) The existence of strategies and policies to achieve compact cities and whether they are consistent and mutually supportive – interrogating the extent to which the city drives densification at the urban fringe, and the spatial, land ownership and socio-economic arrangements in the city.

(iv) The funding of compact cities in metros – exploring fiscal provisions and partnerships for compact cities.

Secondary data from municipal IDPs, frameworks and policies was also used to supplement information collected from personal interviews and focus group discussions.

Table 7. Interviews from the case study municipalities

Department	Organisation	Interview Tool
Land Use Management, Human Settlements	Nelson Mandela Bay	Focus group interview
Strategic Planning and Policy Formulation, Human Settlements	Nelson Mandela Bay	Face-to-face interview
Strategic Planning and Coordination - Office of the Chief Operating Officer	Nelson Mandela Bay	Face-to-face interview
Spatial Strategy and Policy, City Planning and Development	City of Tshwane	Face-to-face interview
Spatial Strategy and Policy, City Planning and Development	City of Tshwane	Face-to-face interview
City Transformation and Spatial Planning	City of Johannesburg	Face-to-face interview
Metropolitan Spatial Planning	City of Ekurhuleni	Face-to-face interview

Source: Commission's compilation.

3.3 Findings and Discussion

3.3.1 Review of compaction polices

Using the policy content analysis framework depicted above, the compaction and densification strategies, policies and frameworks of the four metros were reviewed as follows:

- City of Tshwane – *Compaction and Densification Strategy, 2005;*
- City of Ekurhuleni – *Densification Framework, 2008;*
- Nelson Mandela Bay Municipality – *Urban Edge Review Project incorporating Rural Land Use Management Policy and Urban Densification Guidelines, 2007; and*
- City of Johannesburg – *2040 Spatial Development Framework.*

The strategies, guidelines and frameworks of the four cities illustrate that in general cities have a proper and deep understanding of compaction. The City of Tshwane's Compaction and Densification Strategy for example contains statements that show awareness of compaction and further explores all relevant legislation and policies in order to determine the impact of these on compaction. The Ekurhuleni Densification Framework explores both local and international literature to gain a clear understanding of compaction and related topics. The Nelson Mandela Bay Municipality's *Urban Edge Review Project incorporating Rural Land Use Management Policy and Urban Densification Guidelines* acknowledges that "one of the main goals of compaction and densification is to ensure that the standard of living that people enjoy will actually improve and compaction should therefore be viewed as a positive intervention in the urban structure", illustrating that the metro understands the benefits of compaction and views the concept in positive light.

3.3.2 Vision and objectives

The objectives and rationale of the strategies and frameworks reviewed are clearly and succinctly stated for all the metros under review, except in the case of the City of Ekurhuleni. The compaction strategy of the City of Tshwane only focuses on increasing the gross density of the metropolitan area as its main objective, rather than making detailed proposals for densification in specific areas, while that of Ekurhuleni is devoid of any such objectives. The City of Tshwane's strategy is not clear on how to densify certain and specific areas of the city in order to rectify the apartheid imbalances and develop sustainable human settlements as espoused throughout the document. Despite not having clear objectives, the densification framework of Ekurhuleni identifies various areas within the 'core economic development triangle' for development, and is not general in its approach to compaction. The City of Johannesburg's 2040 Spatial Development Framework has allocated only two pages to the issue of compaction as one of the themes identified as goals of the Spatial Development Framework. There is scant information on how the city plans to adopt compaction as an urban form, except to acknowledge the general advantages of a compact city. Section F of Nelson Mandela Bay Municipality's Urban Edge *Review Project incorporating Rural Land Use Management Policy and Urban Densification Guidelines,* is the *Urban Densification Strategy* for the city. The rationale and objectives of this policy document are exactly the same as those of the Compaction and Densification Strategy, of the City of Tshwane, and are therefore clearly stated.

3.3.3 Implementation

The strategies, guidelines and frameworks reviewed are silent on how exactly compaction in cities will be achieved. The City of Tshwane's *Compaction and Densification Strategy* for example only makes proposals on how to achieve compaction, and does not clearly outline the actual implementation plans and corresponding resources required to realise its objectives. Furthermore, in its objectives the City of Tshwane's strategy acknowledges, albeit indirectly, that city compaction involves various departments in the city, for an example the departments of transport and agriculture. However, in its implementation section these departments and the role they ought to play in achieving compaction do not feature. The City of Johannesburg's 2040 Spatial Development Framework does not have an implementation plan, as is the case with Ekurhuleni's Densification Framework and Nelson Mandela Bay Municipality's *Urban Edge Review Project incorporating Rural Land Use Management Policy and Urban Densification Guidelines.*

3.3.4 Incentives and disincentives

With the exception of the City of Tshwane's *Compaction and Densification Strategy* the strategies, guidelines and frameworks reviewed do not make mention of incentives to encourage compaction, or disincentives to sprawl. The City of Tshwane's strategy is itself not clear on how these incentives and disincentives would be structured and how they are to be managed, except to state that how "these incentives and disincentives will/could apply in Tshwane is a matter that needs to be decided by Top Management, as this requires a principle decision on how the municipality will conduct its business with regard to certain types of developments".

3.3.5 The extent of urban sprawl in cities

Cities interviewed were all in agreement that sprawl is a multifaceted concept, which includes the outward spread of a city and its suburbs to its outskirts including low-density and decentralised development. This spatial arrangement gives rise to scattered development, sometimes outside of the urban edge with a high segregation of uses and design features that encourage car dependency. A certain intensity of development in areas that are outside of the applicable urban edge at a given time is considered sprawl. Some would regard development areas located away from inner cities, yet still within the urban edge, as sprawl while others would regard it as densification. It is generally understood that remote development and the proliferation of development in peri-urban areas and areas outside the urban edge could be regarded as urban sprawl. The City of Tshwane, for an example, is not the result of planned growth, but rather of the extension of its boundaries to incorporate new areas over time. This has resulted in a sprawling city form, vast and complex in nature. Nevertheless, the city does not consider sprawl to be an issue, at least not at the present moment. Pressure to develop outside of the edge exists but is not a major concern. According to Ekurhuleni, the city has always had urban sprawl because of the amalgamation of the towns of Benoni, Boksburg, Springs and Brakpan, however SDFs are in place to determine land uses, provide zoning schemes and introduce the urban edge to control sprawl.

3.3.6 Spatial, land ownership and socio-economic conditions in cities

The metros interviewed are responsible for spatial planning at various levels. This is reflected in the spatial development framework which is included in the IDP for implementation. In the case of Nelson Mandela Bay Municipality an amended *Metropolitan Spatial Development Framework* was adopted by Council in 2015 and the Sustainable Community Planning Guide for the municipality provides the required guidelines for integrated and sustainable urban planning. This addresses development principles, planning principles, planning processes and community and stakeholder participation. This guiding document addresses social, economic, developmental and environmental sustainability and addresses compaction and climate change (albeit in very limited way). The Guide also speaks to the provison of social and economic facilities and amenities as an inherent precondition for sustainable development. Other spatial planning instruments include local spatial development frameworks, urban network strategy, precinct and layout plans and land use schemes.

Ekurhuleni owns large tracts of land which, in terms of its municipal SDF are earmarked for the various land use typologies required for integrated and sustainable development, i.e. environmental conservation and open space, residential development and economic development. There is no real need for the city to embark on a programme to acquire large tracts of land for development. Council has however recently identified various land parcels in well-located areas for residential development (integrated residential development as well as targeted informal settlement upgrading). The development of some of these parcels will contribute to compaction. The identification of well-located 'brown built' land parcels such as defunct schools has more recently been introduced as a densification instrument. This will largely be implemented through the development and implementation of precinct planning in spatially targeted areas such as integration zones.

In the City of Tshwane, the highest densities are found on the peripheral areas of the city due to apartheid's spatial planning legacy. As discussed, it's important to bear in mind that the City of Tshwane was formed as a result of two sets of municipal amalgamations that took place in 2000 and 2011. This has resulted in some areas that may seem to indicate sprawl, but are actually areas from formerly separate municipalities that are currently far from the city's main economic nodes. As set out in the Municipal Spatial Development Framework (MSDF) Work Opportunities map, most of the metro's residents live far from employment opportunities and are required to traverse great distances to reach their places of work. Similarly, the highest income areas are to be found in regions 3, 4 and 6 of the city, also reflective of historical spatial and economic distribution decisions. Much of the most valuable land in the city is in private hands.

3.3.7 Strategies, frameworks and policies to achieve compact cities

All four metros indicated that they have strategies and frameworks on compaction in one form or another. In the case of the City of Tshwane, compact city goals are explicitly indicated in the Compaction and Densification Strategy of 2005, the Metropolitan Spatial Development Framework of 2012 and Regional Spatial Frameworks of 2014. The same is true for the City of Johannesburg, which has the 2040 Spatial Development Framework (adopted by council in 2016). The Nelson Mandela Bay Municipality has a long-term vision currently captured in the IDP and as such in the MSDF, and is not specifically aimed at compaction. Initiatives are underway to develop a new long-term vision for Nelson Mandela Bay. The metro does however have the Urban Edge Review Project incorporating Rural Land Use Management Policy and Urban Densification Guidelines of 2007. The metros were in agreement that even though there are compaction guidelines, frameworks and strategies in place, these policy instruments do not identify role players and their corresponding responsibilities. The objectives of these policies are not discernible and they lack clear goals and responsibilities for all the departments affected.

3.3.8 The funding of compact cities

Focus group discussants indicated that despite all the pronouncements on spatial restructuring in metropolitan municipalities, there are neither incentives nor specific funding for compaction. Furthermore, the discussants pointed out that while a number of fiscal instruments that fund the built environment and spatial restructuring make reference to SDFs at municipal level, they are often not aligned to municipal SDFs. Discussants conceded that with regards to spatial restructuring, there are generally weak linkages between the Municipal Systems Act (MSA) and the Municipal Financial Management Act (MFMA). On the one hand the MSA gives rise to SDFs through IDPs, on the other the budget and the Service Delivery and Budget Implementation Plan are requirements of the MFMA. The budget has to fund the SDFs yet the two are misaligned. For example, the SDF includes infill and densification as a tool to achieve spatial restructuring, but the budget does not have a specific fiscal instrument or line item that corresponds to this. It is this misalignment that leads to the perpetual underfunding of spatial restructuring plans.

The discussants were of the opinion that city compaction can be most efficiently funded through a grant that will serve as an incentive, as is the case with the Built Environment Performance Plans (BEPPs) of metros. According to the National Treasury's Guidance Note for the Built Environment Performance Plan 2016/17 – 2018/19, "the BEPP (Built Environment Performance Plan) is a requirement of the Division of Revenue Act in respect of infrastructure grants related to the built environment of metropolitan municipalities, and is one of the eligibility requirements for the Integrated City Development Grant". Metropolitan BEPPs demonstrate the optimal use of the grants targeting expenditure in priority areas in order to obtain spatial restructuring such as compaction, and they serve as a link between the Budget and the SDF. Built environment capital grants that can be accessed through the BEPP include the Urban Settlements Development Grant, the Public Transport Infrastructure Grant and the Neighbourhood Partnerships Development Grant. The metros acknowledged that the grants obtained for BEPP are on their own not sufficient to address compaction. Even though these grants are for spatial restructuring, compaction is treated as one of the many spatial restructuring plans and does not receive adequate attention and the required corresponding resources.

3.4 Summary and Recommendations

The analysis of the metros' strategies, frameworks and guidelines has revealed that metros have a clear understanding of what compaction is. In some documents reviewed there were clear objectives outlining what a particular policy instrument aims to achieve with regards to compaction, however implementation guidelines were inadequate and in some instances completely absent. The issue of incentives and disincentives only came out strongly during interviews but this was a glaring absence in the strategies reviewed. None of the policies reviewed had funding attached to them. Table 8 depicts the overall summary of findings from the policy content analysis.

Table 8. Summary of findings from the policy content analysis

Measurement objective	Indicator guide	City of Tshwane : Compaction and Densification Strategy, 2005	City of Ekurhuleni: Densification Framework, 2008	Nelson Mandela Bay: Urban Edge Review Project, 2007	City of Johannesburg: 2040 Spatial Development Framework
Information base	Does the policy contain data, statements or analyses that show awareness of compaction?	yes	yes	yes	yes
Vision and objectives	Are there objectives associated with the development or enhancement of compaction?	yes	no	yes	yes
Implementation	Do the implementation provisions include reference to compaction measures?	no	no	no	no
Incentives/ Disincentives	Are there incentives and disincentives to promote or discourage compaction or sprawl?	yes	no	no	no
Policy funding	Is the policy funded?	no	no	no	no

Source: Commission's compilation.

All four metros indicated that there is urban sprawl in cities, and compaction is one of their spatial planning objectives. The metros also indicated that even though they have policy instruments in place that specifically address compaction, there is no clear indication of roles and responsibilities with regards to densification. Most importantly, the compaction and densification strategies currently in place need to be translated into understandable goals per sector department, and then adopted by each departmental head on their scorecard. As with every other strategic goal of a city, each sector department is driven by different pressures, some of which are non-strategic, and it is difficult to enforce the prioritisation of a primary objective of one sector department over another. Metros concur that strategies and policies on compaction are neither consistent nor mutually supportive. Personnel from city planning departments constantly develop strategies and policies that rarely make it into institutionalised implementation plans. There is a glaring lack of consistency in the institutionalisation of the existing spatial plans and policies because compaction policies cut across different sector departments that do not collaborate. Compaction also means different things to different sector departments — in the transport department compaction means access, in environment it means sustainability and in infrastructure it means optimal use. The metros were in agreement that there is misalignment between municipal budgets and SDFs leading to the underfunding of spatial restructuring plans in metros. Metros are also in agreement that an incentive grant specifically targeted at compaction was required in order to advance this type of urban development as one of the pillars of spatial development in South Africa. This is especially in light of the fact that metropolitan municipalities concur that the advantages of compaction far outweigh any disadvantages.

With a view to achieving compaction in South African metropolitan cities, the Commission recommends that:

1. National Treasury introduces an incentive grant specifically targeted at city compaction, an urban form that has the potential to remedy apartheid geography and bring the masses closer to the opportunities of work and facilities. The spatial development grants currently accessed through the Built Environment Performance Plans treat compaction as only but a small and negligible component of spatial transformation.

FINANCIAL
AND FISCAL
COMMISSION

For an Equitable Sharing
of National Revenue

Part 2:

Urban Infrastructure, Growth and Social Inclusion

Chapter 4: Transport and Mobility

4.1 Introduction

There is a pressing need to address urban public transport challenges in South Africa. It is estimated that historical transport backlogs cost the country between 4% and 5% in gross domestic product (GDP) annually (South African Cities Network, 2015). In addition, more than 60% of households earning less than R500 a month spend more than 20% of their income on public transport (Stats SA, 2013). To improve the performance of public transport, government has passed legislation to implement integrated public transport systems. In particular, the National Land Transport Act (NLTA) of 2009 which provides urban municipalities with significant powers to take over public transport functions in order to facilitate better planning and implementation of integrated public transport and encourage a compact city form.[12] The literature (Borrego *et al*, 2006, Pflieger et al, 2009, Rhode *et al*, 2014) shows that integrated public transport, which is coordinated with other built environment functions such as housing, can improve access to goods, services and economic opportunities for disadvantaged groups, improve air quality and reduce the operational costs of urban transport.

Despite policy, it has been acknowledged that the implementation and performance of the full set of transport functions by urban municipalities has been relatively slow. Only four of the 13 cities that have been receiving national grant funding for Integrated Public Transport Network (IPTN) implementation have an operational bus service covering parts of the city. In addition, the slow pace of cities acquiring assigned transport functions is likely to perpetuate the current status quo in urban transportation with features including:

1. Government spending more on public transport;
2. The costs of transport being disproportionately higher in poor households;
3. Poor people spending more time travelling than households with higher incomes;
4. Increased car use, causing congestion on the roads; and
5. Inefficient land use patterns, obstructing economic access for the urban poor.

Urban municipalities face various challenges that prevent them from assuming transport functions contained in the NLTA including inadequate and unsustainable funding, lack of capacity to implement policy, inadequate institutional structures and lack of policy monitoring (Walters, 2014, GIZ and National Treasury, 2016). For public transport to support inclusive growth and improved access in cities, these key constraints to implementing the NLTA and the National Public Transport Strategy of 2007 should be addressed.

This chapter then investigates two main questions. Firstly, it considers the extent to which financial constraints are a part of the reason for the slow uptake and performance of the full set of public transport functions by cities. Secondly, it investigates whether an urban municipality's own sources of revenue can play a role in supplementing existing funding streams, and in doing so support the uptake of public transport functions in urban municipalities.

The specific objectives of the chapter are to:

- Review policy developments in public transport for urban areas and outline strategic issues;
- Examine the funding challenges urban municipalities are experiencing in implementing the National Public Transport Strategy and NLTA; and
- Explore alternative own revenue sources contained in the NLTA that urban municipalities can exploit to support sustainable funding of integrated public transport networks and incentivise the desired policy outcomes such as modal shifts and a compact city form.

While cities have been requested to earmark 4% of own revenue for the implementation of their integrated transport network, this is considered insufficient to deal with the historical backlogs and expand their network. In addition, local government only receives 12% of total transport subsidies from national government, yet are required to provide services to huge volumes of commuters. The short-term nature of intergovernmental grants is a further problem given long-term operational liabilities and the risk that national grant funding envelopes can change. In a recent study by GIZ and National Treasury (2016) five out of the nine metros indicated a desire to assume public transport functions contained in the NLTA but had made no commitment through resource allocation to acquire the functions. These funding concerns, among other things, has resulted in calls to provide greater funding security to urban municipalities to finance integrated transport networks and expand existing networks further.

12 Previous studies by the Financial and Fiscal Commission (2010, 2012, 2014) generally support the assignment of transport functions to urban municipalities.

In terms of the NLTA, every municipality that is establishing an integrated public transport network must establish a fund for its area known as a Municipal Land Transport Fund. The NLTA also identifies sources of income that municipalities funding an integrated public transport network can tap into, subject to the Municipal Fiscal Powers and Functions Act of 2007. Despite these funding provisions in the NLTA, many cities are still not exploring alternative funding sources, even though transport financing for urban municipalities is under severe pressure.

Urban transport can be classified into four main categories, namely non-motorised transport, public transport, informal motorised transport and private motorised transport (UN-Habitat, 2013). The assessment focused only on the funding of land-based public transport in urban municipalities. Other challenges to transport devolution such as municipal capacity, institutional arrangements and policy monitoring are not addressed in this investigation.

4.2 Research Methods

The study adopted a combination of methodological approaches. A policy and budget analysis was conducted to highlight strategic issues in urban transport services and a broad range of stakeholders were consulted to highlight funding challenges in urban municipalities. The next step was to identify potential revenue sources that municipalities can tap into to raise additional revenue for their proposed integrated public transport networks.

International case studies were examined to identify additional revenue sources to fund public transport and the key characteristics and implications of each income source is discussed, especially in relation to densification. Those with a low probability of being successfully implemented were eliminated. Once a narrowed-down selection of income sources was established, based on a high probability of implementation success and integration of built-environment functions, the study assessed the probable amount that each new income source might be able to generate for urban municipalities.

4.3 Findings and Discussion

4.3.1 Urban public transport assessment

Urban public transport initiatives are guided by national legislation, policy and strategy. The primary guiding documents include the Transport White Paper (1996), the Public Transport Strategy (2007), the National Land Transport Act (2009) and the draft revision to the Transport White Paper (2017).

The Transport White Paper (1996) set the tone for public transport improvement in South Africa and introduced the policy imperatives of modal integration, customer focus, affordability and overall enhancements to service quality including reliability and safety. The devolution of functions to the municipal level is also a key theme of national policy and a key guiding principle of the National Land Transport Act.

The Public Transport Strategy (2007) and the associated Action Plan set the parameters for the implementation of Integrated (Rapid) Public Transport Networks. The strategy envisaged a radical transformation of the fragmented public transport system through the establishment of a rapid network of rail and Bus Rapid Transit (BRT) services which would provide seamless, high quality, universally accessible, car-competitive services to customers with affordable fares and an affordable level of subsidy from government. The incorporation and transformation of the existing minibus taxi industry was a key tenet of this strategy and a contracting role for local government was also encouraged. The strategy was supported by the establishment of a conditional grant for municipalities to support and accelerate its implementation in 12 (later 13) priority municipalities.

The results of this strategy have been mixed. Significant investment has been directed toward the 13 municipalities, but only a few have operational systems, namely Johannesburg, Cape Town, George and Tshwane. The focus has been on developing BRT corridors, which have proven to be more expensive (from an initial capital and subsequent operational perspective) than originally projected, with higher subsidy requirements. Limited improvements have been made to other parts of the network. Urban rail services are in a state of crisis and the minibus taxi industry continues to provide most public transport services at generally low levels of service quality. As a result, there has increasingly been a shift toward alternative approaches to public transport improvement, including that of the National Land Transport Strategic Framework of 2015 which specifically promotes an incremental and ‘back to basics’ approach.

The Draft Revised White Paper on National Transport Policy is intended to update the 1996 version and incorporate any significant changes which have occurred in the sector during the intervening period. Whilst the revised objectives are still in draft form, they demonstrate clearly the policy intent. An analysis of the statements contained in the draft policy suggests a renewed focus on providing public transport provision to a wide range of users, including special needs users and users in urban and rural environments. In line with the NDP, emphasis is placed on the improved affordability of public transport relative to household income and ensuring the availability of car-competitive public transport. The statements also identify the need for centralised and integrated information management for public transport and the utilisation of smart technology as an important enabler in public transport provision. The draft white paper reiterates important objectives that have not as yet been fully realised following the 1996 version. Some of these objectives include revised institutional arrangements with the allocation of mandate and functions to the lowest appropriate level of government and a focus on the current public transport industry, particularly the minibus taxi industry, with a move towards corporatisation, empowerment support and improved regulation and labour practices within the industry.

These focus areas reflect much of the current practice in the sector, albeit the extent of implementation remains quite limited, and the significant financial implications of these strategic objectives are also being felt. While there has been substantial investment in municipal public transport to give effect to the Public Transport Strategy particularly through the Public Transport Network Grant (PTNG), there is an increasing recognition that alternative approaches and funding models are imperative for the emergence of good quality public transport in urban municipalities. The draft white paper makes specific reference to funding challenges facing the public transport sector in which, “public transport remains inadequately funded” (DOT, 2017: 46) and recommends the establishment of “sustainable, streamlined and dedicated funding for public transport infrastructure, operations, and law enforcement” (DOT, 2017: 43).

In a previous study, the Commission showed that many municipalities might never have the resources (both human and financial) that are required to take over transport functions (FFC, 2014). As such, the Commission suggested a dual approach to assigning transport functions, through a combination of:

(i) The direct assignment of functions to municipalities, municipal partnerships or municipal entities (in terms of Section 76a of the Municipal Systems Act), provided they demonstrate the necessary ability and capacity.
(ii) The formation of a national entity for coordinating passenger transport service delivery to assist municipalities that are unable to deliver adequately on the functions. This is justifiable in terms of Section 76b of the Municipal Systems Act.

4.3.2 Intergovernmental Funding Flows in Public Transport

Intergovernmental transfers have played a significant role in financing public transport. As Table 9 shows, despite spending close to R47 billion in transfers on public transport, the subsidy framework is underperforming. Subsidies are still mode specific and skewed heavily in favour of national entities and provincial government. Local government only receives 12% of transport subsidies, despite being at the coalface of service delivery. The assumption is that local government, especially metros, have sufficient own revenue to self-finance a large portion of its public transport services. However, given the tight fiscal framework and increasing pressures to expand basic service provision to more households, own revenue sources of urban municipalities are under strain. In response there are increasing calls to find alternative revenue sources that can support the financing of public transport in urban municipalities. In addition, transfers are not linked to demand management hence subsidy amounts do not increase as ridership numbers increase. Funding urban transport from intergovernmental transfers is considered risky as the resource envelope can change at any time.

Table 9. Intergovernmental transfers for public transport

R'million	Year		Proportion		Average Annual Real Growth (2010/11 - 2016/17)
	2010/11	2016/17	2010/11	2016/17	
Transfers to National Entities	16 319	25 664	56%	55%	3.9%
SANRAL	6 845	6 773	23%	15%	-5.8%
PRASA	9 474	18 890	32%	40%	10.9%
Transfers to Provinces	8 682	14 932	30%	32%	6.4%
Public Transport Operating Grant	4 153	5 400	14%	12%	-0.6%
Provincial road maintenance grants	4 091	9 532	14%	20%	16.5%
Gautrain	438	0	2%	0%	-22.3%
Transfers to Local Government	3 710	5 695	13%	12%	3.3%
Public Transport Network Grant	3 700	5 593	13%	12%	2.9%
Rural Roads network Grant	10	102	0%	0%	147.7%
Other Transfers	448	353	2%	1%	-9.2%
Taxi Recapitalisation	448	353	2%	1%	-9.2%
	29 159	46,644	100%	100%	4.4%

Source: Commission's calculations based on Budget Review (various), DORB (various), ENE (various).

The functional disaggregation of public transport grants shown in Table 10 underscores the inconsistency between public transport policy and funding. Noticeably, commuter trains received the biggest chunk (40%) of national transport transfers in 2016/17, yet commuters use trains the least out of all modes of public transport. In addition, public roads receive the second biggest transfer (35%) from national government, thus reinforcing the prevailing notion of a bias in the current allocation framework towards private car users. A concerning trend is the decline in the proportion of grant funding disbursed to bus services. This suggests any shortfall in transport services from grant funding is expected to be made up by using own resources of provincial and local governments. Taxis only received 1% of total transport transfers in 2016/17 highlighting the view that taxis are largely excluded from the funding framework even though they serve as the mode of choice for the mass transit of people in urban centres.

Table 10. Intergovernmental transfers towards public transport functions

	Year		Proportion	
	2010/11	2016/17	2010/11	2016/17
Bus	7 863	11 095	27%	24%
Road	10 936	16 305	38%	35%
Train	9 912	18 890	34%	40%
Taxi	448	353	2%	1%
	29 159	46 644		

Source: Commission's calculations based on ENEs (various).

4.3.3 Public transport costs in urban municipalities

Understanding the types of public transport costs and funding at the municipal level is important in understanding funding challenges. Public transport costs incurred by urban municipalities can be categorised into capital costs, transitional costs, planning costs, direct operational costs, and network operational costs. This categorisation is informed by the PTNG framework given its importance as a source of funding. Capital costs (including fleet), transitional costs and planning costs are mostly once-off costs incurred during establishment. Direct operational costs and network operational costs are typically recurring costs.

The range of expenditure by municipalities on the high-level cost categories is shown in Table 11, divided into cities that have operational IPTN bus services versus cities that do not yet have operational IPTN bus services. This is based on data from the 2014/15 municipal financial year, as data over a longer period is not available. [13] Based on this data, it is difficult to draw strong conclusions. However, observations include that for cities with operational IPTN services, capital costs are still the most significant expenditure item. This is likely because cities are still in the early stages of implementation with services rolled out over only a small part of the municipality. For cities that do not yet have operational IPTN services, costs are split between capital and planning.

Table 11. Range of percentage expenditure on cost categories

Category as % of Total Cost	Municipalities with operational IPTNs	Municipalities not yet operational
Capital Costs	43% to 54%	0% to 91%
Transitional Costs	5% to 18%	
Planning Costs	0% to 31%	0% to 100%
Direct Operating Costs	6% to 24%	
Indirect Operating Costs	12% to 25%	

Source: National Treasury (2016).

4.3.4 Funding public transport (transfers) in urban municipalities

Urban municipalities finance their integrated transport networks from own revenues, transfers (e.g. PTNG), fare and other system revenue and other government funding. The main transfer from national government is the PTNG which is allocated between 13 cities. The grant has been increasing in real terms since 2007/08, however increases have not kept pace with the expansion of the integrated networks and the high operational costs of rolling out BRT (see Table 12). In addition, the per capita allocation across urban municipalities varies significantly, even among metros. In 2015/16, government introduced a new formula in response to calls by municipalities for greater certainty around their PTNG allocations. The PTNG framework provides conditions for use of the grant, including that the grant may not be used to offset the cost of direct operating costs for public transport.

Table 12. Public transport network grant for selected municipalities, 2007/08 and 2016/17

	Spending		Real per capita spending			
Rand (thousands)	2007/8	2016/17	2007/8	2016/17	Real per capita increase (2007/8 – 2016/17)	Real annual per capita growth (%)
Mangaung	25 000	200 142	29	119	90	10.1
Ekurhuleni	13 000	500 002	4	73	69	7.7
Johannesburg	329 000	1015 508	74	103	29	3.2
Tshwane	105 000	950 011	36	148	112	12.4
eThekwini	125 000	950 078	31	125	94	10.4
Mbombela	55 000	200 058	76	142	66	7.4
Polokwane	40 000	200 026	49	126	77	8.6
Rustenburg	15 000	285 039	27	227	201	22.3
Cape Town	230 000	950 063	57	116	58	6.5

Source: Commission's calculations based on Division of Revenue Act (various).

Where fare income accrues to the municipality, fare revenue is an important source of funding for municipalities managing subsidised bus services. Other system revenue also makes a small contribution in some cities and municipalities. Fare revenue is roughly 5%–24% as a share of direct operational costs (National Treasury, 2016).

13 It is also important to note that municipalities may categorise costs differently, making direct comparison between cities difficult.

Municipal contributions include rates and funding from equitable share or other sources to cover municipal public transport functions. The City of Cape Town has, for example, allocated up to 4% of its rates bill to public transport costs (Cape Town, 2015). Other government funding may also play a role, such as provincial contributions. In the case of secondary cities, the potential to use rates to make a significant contribution toward the performance of public transport functions is very limited due to the overall low rates base in these municipalities.

The Public Transport Operations Grant (PTOG) is a Schedule 4 grant that is allocated to cover direct operational costs of public transport. The total PTOG allocation for 2017/18 is R5.7b (Division of Revenue Bill, 2017). PTOG funding is currently entirely allocated to already existing contracts, mostly run at the provincial level pending devolution to the municipal sphere. As a result, this grant is not currently available to municipalities to fund their public transport functions except to the extent to which existing PTOG contracts are incorporated into their IPTNs. As contracts and the subsidy are devolved, municipalities will need to manage a complex transition process from currently subsidised services to funding services in their IPTNs.

4.3.5 Funding challenges for public transport in urban municipalities

The funding challenges facing urban municipalities implementing the Public Transport Strategy of 2007 can be categorised into four broad categories based on the cost categories of the Public Transport Network Grant. The analysis of the funding challenges detailed below is established through engagements with stakeholders in urban municipalities.

a) Capital requirements of public transport infrastructure

There is a legacy of under-investment in public transport leading to a significant infrastructure backlog and the predominance of road expenditure for private vehicles over public transport expenditure. The initial BRT solution proposed is relatively expensive, particularly the Department of Transport requirements for automated fare collection systems and systems characterised by universal accessibility. In addition, the spatial challenge presented by cities results in long travel distances that require extensive infrastructure (particularly road infrastructure where dedicated lanes are built over long distances).

Another funding challenge is the institutional fragmentation of the public transport function across rail, bus and minibus taxi modes (as well as walking and other non-motorised transport), where urban municipalities do not have a mandate (or funding) for rail or legacy bus services, and therefore implement new services where upgrading of the existing systems may be cheaper or more appropriate. This is exacerbated by fragmentation between municipal grants, where different grants exist for different purposes, when an integrated urban landscape, settlements and public transport approach is required. The result is typically 'siloed' spending of the grants and poor integration of the functions, resulting in suboptimal outcomes, often manifested as sub-optimal capital expenditure.

The Public Transport Network Grant has a relatively short-term nature, with one year of guaranteed funding and two years' indicative funding. Its requirements include utilising the funding allocated within the financial year ('use it or lose it') leading to unintended consequences regarding the optimum utilisation of funds and priority capital expenditure areas. The uncertainty in capital allocation confers more risk to the contractors, which typically raises the cost of the works (especially where works have to be reprioritised and funds have to be utilised quickly). In addition, utilising future grant allocations to access debt funding in the short term, to more closely align a capital expenditure programme with available funding, is difficult to achieve given the indicative nature of the grant funding. In the past, the DOT was willing to guarantee a proportion of the outer year funding to address this concern, but significant problems in this regard remain.

b) Operating costs

The high cost of the operating contracts, in most cases are above the costs initially expected because of the long travel distances that are typical of South African cities and the often higher rates associated with the contracts negotiated in terms of Section 41 of the National Land Transport Act. Other reasons that explain the high costs of operating contracts include significant cost escalations linked to fuel and labour pricing, and institutional and capacity challenges in government resulting in poor contract management and poor enforcement.

Furthermore, transport operators in urban municipalities receive modest fare box returns due to the low ability of many public transport users to pay, limited infill development and directional travel patterns resulting in low seat renewal along the trip and low bi-directional flow, both of which are key drivers of cost recovery. There is also fare leakage on the systems especially where conventional ticketing systems are in operation as well as competition from other operators, which is often illegal, but goes unchecked due to poor regulation and enforcement as well as a consumer preference for minibus taxi style services.

The amount set aside for operational expenses from the PTNG results in an operational shortfall, with the PTNG not available to cover direct operating costs (i.e. the shortfall associated with the operating contract itself) and the PTOG typically allocated to provinces and fully committed to existing contracts. The expectation of the DOT was that the direct operating costs would be covered by the own resources of urban municipalities based on the expectation that there would be a small, if any, direct operating cost shortfall. This has proven to be incorrect. Instead projected operational shortfalls for urban transport networks are well in excess of what most cities can afford. Given the long-term liability associated with the operator contracts, which are negotiated for a 12-year period as provided by the NLTA, the impact of the current grant frameworks and the project costs of the operating contracts on city treasuries is very significant indeed.

The short-term nature of PTNG and PTOG is a further problem given the long-term operational liabilities. It requires city treasuries and provinces to take significant risk in the event that national grant funding envelopes change. This has resulted in increasing calls to provide funding security, and to replace the national grant with secured local income streams that are currently flowing into the national fiscus.

a) Costs of establishing and maintaining the institutional capacity

Institutional capacity requirements for urban transport networks is very significant requiring specific capacity within a dedicated structure within the municipality. Most urban municipalities have not yet fully structured themselves to assume the full functions required of them under the NLTA. The cost of establishing and staffing the structure, building the requisite capacity and the key organisational and financial management systems required is proving to be very significant. This is in addition to the challenges of the time required in order to achieve this institutional capacity and the scarcity of core skills required across the range of technical areas.

The NLTA allocated a wide range of functions to the municipal sphere of government, with some functions to be assigned to the municipalities, notably the regulatory authority function and the contracting authority function for provincial contracts. Whilst this has been the subject of significant previous investigation by the FFC, amongst others, the funding arrangements to support the assignment of functions and the potential unfunded mandates arising from the NLTA remain a challenge for urban municipalities.

Whilst the PTNG is available to cover some of the above institutional costs (termed “indirect costs”), the framework only allows for 70% coverage for the first two years of operations followed by 50% in the third year. Moreover, given the cuts in the PTNG funding envelope currently being experienced, many cities are struggling to make up the shortfall from their own income.

b) Transition costs of transforming the minibus taxi industry

The transformation of the minibus industry has resulted in the need for compensation payments to holders of valid operating licences that are replaced by new integrated public transport services. The precedent set across the country for compensation is high, and increasing with each new compensation transaction. Given the large numbers of operating licences in the metropolitan areas, in some cases a legacy of poor regulation and oversight of the operating licence regime, the total cost of compensation is very significant indeed, and has previously not been adequately factored into the financial planning for the transport network. Whilst all of the PTNG can be used to cover this cost, the limited amount of PTNG available and competing demands for the allocation from capital, indirect costs and compensation are relevant factors.

4.3.6 International case studies

This section considers three case studies to demonstrate approaches to funding public transport systems in urban municipalities outside of South Africa, including the extent to which municipalities use their own sources of revenue. It is important to note however that each city faces different challenges and has different funding opportunities that are context specific. Findings may not always be applicable to South African cities[14].

14 Good information for developing countries was not readily available at the time of conducting this study.

A summary of the three cities reviewed in Tables 13 and 14 shows that funding arrangements for public transport differ markedly by context and that a wide range of sources are used to cover costs.

Government subsidies and fare revenues are generally the largest sources of funding. Alternative sources of a municipality's own income generally make a smaller contribution, apart from in Vancouver, where taxes are the primary funding source. While these case studies demonstrate different approaches to funding, the key principle that can be applied is that public transport is needed, is used, and importantly is funded by a mix of revenue that is appropriate to the circumstances of a particular city.

Table 13. International case studies

	London (UK)	Vancouver (Canada)	South – Eastern Pennsylvania (US)
Context	Population of 8.4 million. Transport for London (TfL) is responsible for the city's transport network, which includes over ground and underground rail, buses, trams, cable cars and river services. Public transport is extensively used with private transport usage being the exception rather than norm.	Vancouver is the third largest metropolitan area in Canada and has a population of 2.4 million people. Translink is the regional transport authority for metropolitan Vancouver and is responsible for the city's public transport network.	The South-Eastern Pennsylvania Transit Authority (SEPTA) is responsible for public transport in five counties in the state of Pennsylvania, including the City of Philadelphia. The Authority serves a population of four million people and has a ridership of 1.1 million trips per day (300 million trips a year) across rail, bus, subway and tram.
Sources of Funding	Funding for the transport network includes fares (47%), government grants (25%), borrowing and cash movements (17%). Other sources of funding contribute 11% to total income and include advertising, congestion charging, road network compliance charges, property rental and sales. These sources cover both operational and capital costs. London is a relatively dense city, with a wealthy population and high property values (TfL, 2017).	The primary source of funding for Translink is taxes and tolling (60%)[2], including bridge tolling, fuel taxes, parking taxes and a portion of property taxes collected by the 21 municipalities that make up the region. System revenue (including public transport fares, advertising and park and ride fees) is also a significant source of revenue (37%), while government transfers provide a relatively small contribution (2%) (Translink, 2016).	SEPTA's operating revenue is made up of federal, state and local subsidies (62%), fare revenue (34%) and other income (4%). Other income includes property lease income, parking fees, advertising income, frequency regulation income, and income from the sale of scrap metal. Subsidy revenue is derived primarily from the state and this, in turn, is raised through a variety of taxes and fees including a portion of the state's sales tax revenue, lottery proceeds, tyre fees, licence fees, vehicle lease fees, vehicle rental fees and traffic fine revenue (SEPTA, 2016). SEPTA's capital budget is made up entirely of grants from federal (38%), state (60%) and local authorities (2%), with the largest portion from state sources.

[2] Tax revenue (excluding tolling) is made up of fuel taxes (46.2%), property taxes (40.7%), parking taxes (8.2%), a hydro levy (2.6%) and replacement taxes (2.3%).

Source: Commission compilation.

Table 14. Summary of findings from international review

	London	Vancouver	SE Pennsylvania
Primary funding sources	• Fares • Government grants • Borrowing and cash movements	• Taxes and tolling • System revenue (including fares) • Government transfers	• Government subsidies • Fares
Fare/System Revenue	47%	37%	34%
Government Grants	25%	4%	62%
Other Sources	11%	60%	4%

Source: Commission compilation

4.3.5 Developing alternative sources of own income in urban municipalities

South African urban municipalities are experiencing a funding gap that limits their ability to implement IPTNs, and to take on the full set of public transport functions. Several additional funding sources are considered which may help municipalities to take on the full set of public transport functions and fund development of improved public transport systems. The potential funding sources considered include fuel levy, parking levy, parking tariffs, congestion charging, advertising, land value capture, development charges, donor sources, carbon funding, private sector and Sector Education and Training Authority.

The sources of funding were prioritised based on their revenue-raising potential, alignment with policy objectives, whether it was a recurring or a once-off source of income, and the complexity of implementation. With this prioritisation, the fuel levy, parking levy, municipal parking tariffs, congestion charging and advertising emerged as the most promising options to pursue. Developer charges have also been highlighted as an important once-off source of funding. These sources are summarised in Table 15. Given that the fuel levy and parking levies have a similar impact and target a similar market, the concurrent implementation of these levies should be carefully considered. It should also be noted that ring-fencing of these sources for use on public transport might be difficult due to the many service delivery focus areas in municipalities.

Table 15. Priority alternative sources of funding

Source	Revenue-Raising Potential3	Alignment with Policy Objectives	Recurring vs Once-off	Complexity of Implementation
Fuel Levy	High	Medium	Recurring	Medium / High
Parking Levy	Medium	Strong	Recurring	Medium
Municipal Parking Tariffs	Medium	Strong	Recurring	Medium
Congestion Charging	High	Strong	Recurring	High
Advertising	Low	Not applicable	Recurring	Low
Developer charges	Medium	Medium	Once-off	Medium

Revenue-Raising Potential	Metropolitan Municipality Pop. > 3 million	Secondary City Pop. > 0.1 million
Low	• < R50 million	• < R1 million
Medium	• R50 million – R200 million	• R 1 million – R50 million
High	• > R200 million	• > R50 million

Source: Commission compilation.

4.3.5.1 Fuel levy

National government currently collects approximately R63 billion in revenue through the national fuel levy (National Treasury, 2017). Municipalities may consider the introduction of a fuel levy surcharge to generate additional revenue for public transport. Coastal municipalities could impose a surcharge which equalises the fuel price difference between them and those inland. It is theoretically envisaged that the economic effect of a small increase in the fuel price could be largely offset by the economic benefits arising from investment in public transport (BER, 2003).

As provided for in the Constitution, both the provincial and local spheres of government may impose a fuel levy surcharge, subject to approval by national government and the promulgation of enabling national legislation. However, if a single municipality imposes such a surcharge there is a risk of cross-border shopping by motorists who are likely to target fuel stations that fall outside the municipality. Therefore, it may be more appropriate for the surcharge to be implemented at a provincial level.

The Minister of Finance approved the Western Cape Government's application for the introduction of a provincial fuel levy in August 2006, subject to several conditions. In terms of Section 3(6)(b) of the Provincial Tax Regulation Process Act of 2001, National Treasury was required to table a bill in Parliament within 90 days of the Minister's approval. The bill would regulate the proposed provincial fuel levy as required by the Constitution.

However, both the national and provincial governments, perhaps due to political considerations at the time, chose not to proceed with the implementation of the provincial fuel levy. In its submission on the Western Cape proposal for a fuel levy,

the Commission cautioned that there could be political resistance to the introduction of a fuel levy, and this should be taken into account to minimise fears of the levy being used by different political parties to make political headway either way. Given that ten years have elapsed since 2007 and the political landscape has shifted, it is likely that the political reasoning behind the 2007 decisions may also have changed.

The fuel levy surcharge has the potential to generate significant additional revenue for public transport and should be considered by both large metropolitan municipalities and secondary cities. For a large metropolitan municipality revenue estimates range between R400 million and R1 billion per annum, and would depend on the quantity of the levy imposed and the allocation. This would be an ongoing and predictable stream of income. Based on extrapolation, the fuel levy estimate for a secondary municipality is in the order of tens of millions of rands per annum.

4.3.5.2 Parking levy

The implementation of levies on private parking bays in city and business centres is a lower cost method of achieving essentially the same objectives as a congestion charge. It is envisaged that municipalities could implement a scheme whereby a fixed levy would be charged on each private parking bay in certain parts of the municipality, levied on the property owner via its municipal bill. The property owner would then seek to recover the user charges from the building's tenants or parking bay users. The implementation of such a levy is specifically provided for by the NLTA. A parking levy is aligned to national strategic imperatives given that it supports improvements to public transport, encourages a shift to public transport and can support broader land use policy imperatives.

It is estimated that approximately R50 million per annum could be generated by imposing such a levy on the central business district of a large metropolitan municipality on a full recovery basis, while approximately R170 million could be generated across the municipal area. The revenue generated by both parking tariffs and levies was estimated for a secondary city at just below R1 million per annum. Revenue generated is dependent on the size of the municipality and the extent of private parking bays.

4.3.5.3 Municipal parking tariffs

Municipalities own and manage on and off-street parking and can charge a tariff for its use. Surplus revenue can be ring-fenced for public transport and optimised through efficient parking management, expanding the areas, which are actively managed, and increasing parking tariffs. In addition to raising funds for public transport, parking tariffs correct for the negative externalities of motor vehicle use and incentivise a shift to public transport.

This opportunity is particularly appropriate in large, metropolitan municipalities with a high number of parking bays and sufficient levels of parking demand and turnover. In secondary cities, parking tariffs are unlikely to generate substantial additional revenue.

Analysis in the context of a large South African metropolitan municipality estimates that the surplus that could be generated is between R50 million and R121 million per annum, while in a smaller secondary city, revenue from both parking tariffs and parking levies is estimated at under R1 million per annum.

4.3.5.4 Congestion charges

Congestion charging is generally used to manage transport demand by charging road users when accessing certain areas of a city and acts as a mechanism for recognising the negative externalities of motor vehicle use. Whilst the effect is sometimes deemed to be similar to what is achieved through road tolling, road-tolling revenues are road-specific and are often used to fund road improvements, whilst congestion charges are area-based and more suitable for funding public transport. Some of the key benefits associated with congestion charging are a reduction in congestion and transport-related emissions achieved by encouraging road users to shift to public or non-motorised alternatives, reduced travel times for all road users in the area and additional revenues for transport and public transport.

The three largest congestion charging schemes implemented to date are in London (2003), Stockholm (2007) and Singapore (1975/1998). A study of these schemes shows that revenue potential is significant, but collection and enforcement costs are likely to represent at least 50% of revenue collected. A study done by DOT (DOT, 2012) concluded that approximately R700m in revenue (inflated to the current day) could be generated by imposing a congestion charge for the Cape Town Central Business District. While congestion charging is worth consideration due to the potential quantum of funding that may be generated, it should be considered against other more cost-efficient means of achieving similar results such as introducing

a parking levy. In addition, congestion charging is appropriate for a large metropolitan city, but unlikely to be appropriate for smaller secondary cities given the lower traffic volumes and cost of establishment.

Congestion charging is also most appropriate where public transport offers a quality alternative to private vehicles. In South Africa, urban public transport systems are, arguably, not yet able to provide a suitable alternative to private vehicles. However, if the primary purpose of a congestion charge or road-user charge is to raise funds for public transport then this becomes a less important consideration. Finally, congestion charging is aligned to national strategic imperatives because it supports a mode shift to public transport and is explicitly referenced in section 28 of the NLTA.

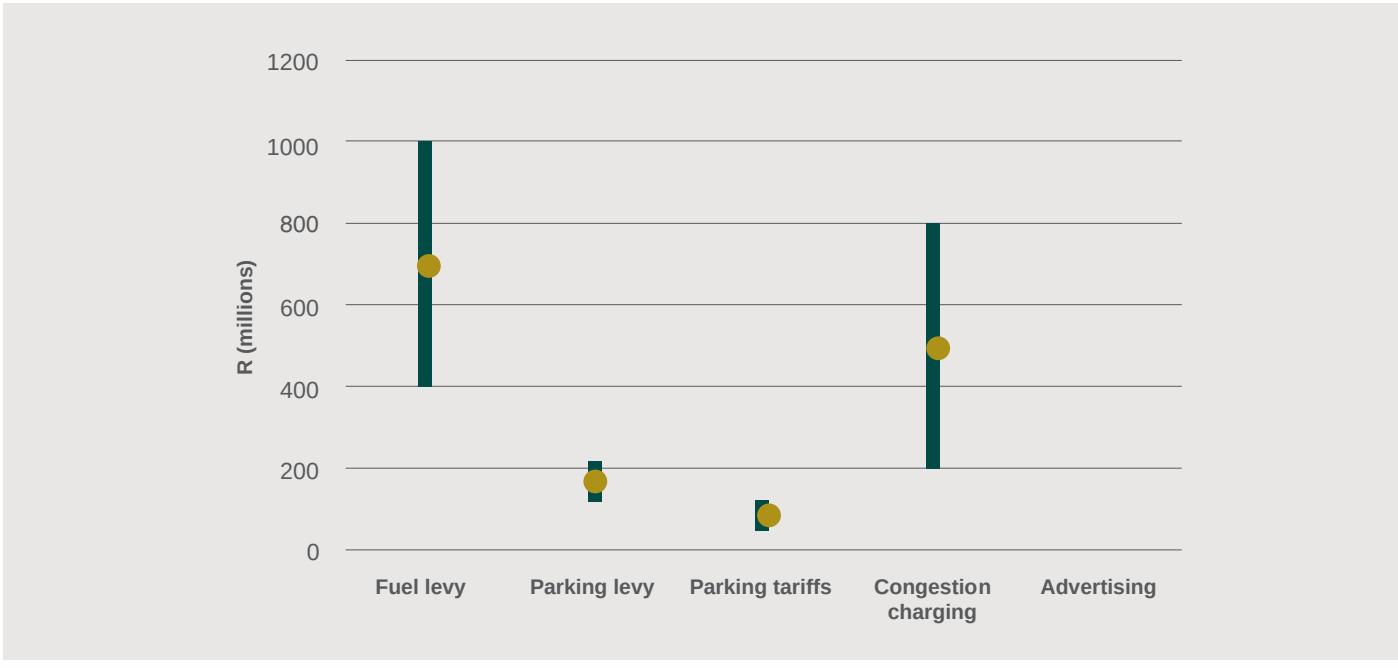
4.3.5.5 Advertising

There are advertising opportunities associated with fixed public transport infrastructure (including interchanges, stations and bus stops) and public transport vehicles like trains and buses. Advertising that makes use of public transport infrastructure and vehicles has the potential to reach a significant number of consumers making use of public transport, other road-users and pedestrians. The international review concluded that advertising makes a relatively small contribution towards total revenue. In a large metropolitan municipality, advertising is estimated to generate approximately R10 million per annum, while in a smaller secondary city it is estimated to generate approximately R2.9 million per annum. Municipalities are specifically empowered to engage in public transport marketing and promotion activities by s11(c) (xi) of the NLTA. The contribution of advertising as a viable source of income towards offsetting the deficit is relatively small. Cities with operational IPTN systems are already pursuing this funding stream, hence advertising may not be a viable option for cities in leveraging additional funding.

4.3.5.6 Summary of potential contribution of additional revenue sources

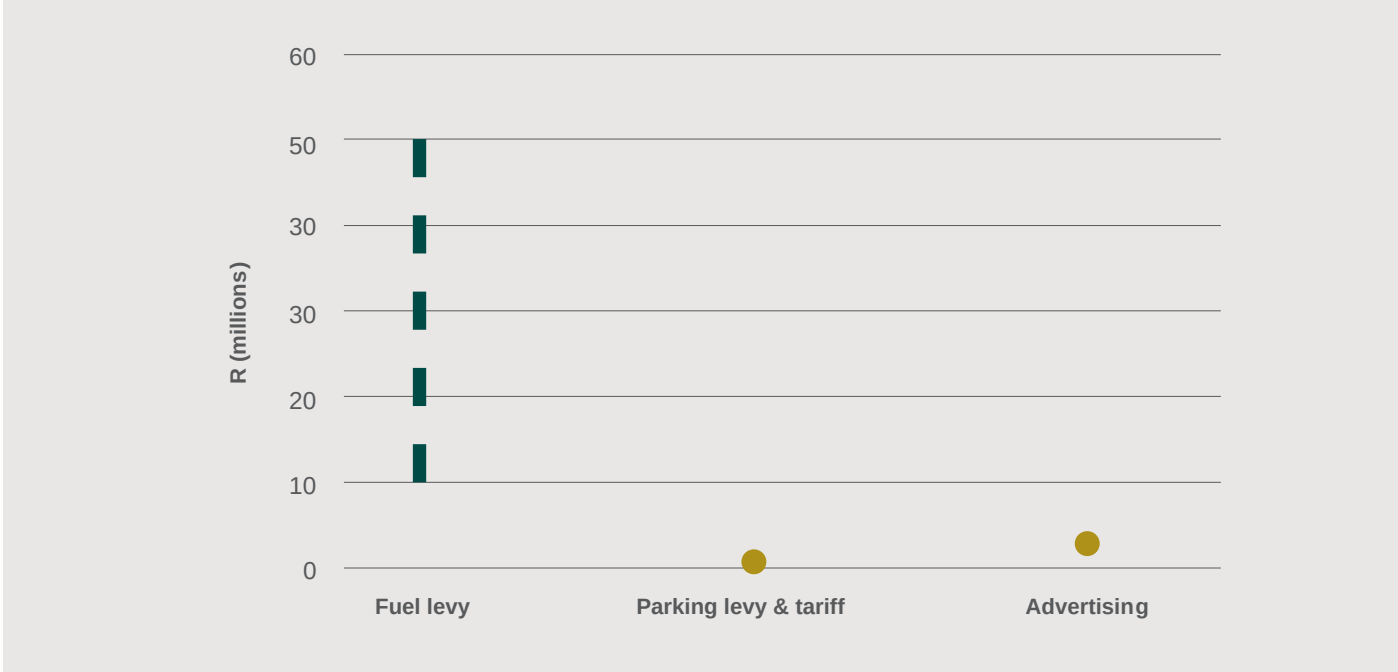
The potential estimated income ranges from the additional sources of recurring revenue for a South African metro area and a South African secondary municipality, are shown in Figures 19 and 20. The potential for additional revenue is significantly greater in the metro context than in secondary cities, with the fuel levy, congestion charges and parking levies and tariffs offering the most significant potential sources of funding. In secondary cities, the fuel levy has the greatest revenue-raising potential. Development charges are not included as they are difficult to quantify. In addition, they produce a once-off source of income that could offset capital costs but would not provide a predictable and recurring source of funding. Importantly, the recurring sources of funding would accrue directly to the municipal sphere and therefore address current funding challenges related to the short-term nature of funding.

Figure 19. Estimated potential income from additional sources of funding in metros



Source: Commission compilation

Figure 20. Estimated potential income from additional sources of funding in a secondary city



Source: Commission's compilation.

4.4 Key Strategic Funding Issues

Alternative sources of funding represent promising additional income, and in combination with other income sources, can contribute significantly to close the funding gap. This is reinforced by the review of international case studies. While the fuel levy, particularly in metro areas, could significantly contribute to covering shortfalls, national grant funding would still be required. Achieving fiscal and financial sustainability, thus allowing municipalities to take on the full set of transport functions, will require a multi-faceted approach. One area of focus should be pursuing additional sources of income.

A second critical area of focus that should be further investigated is the centrality of transit-oriented development, which will help to create demand patterns that result in bi-directional travel and seat renewal, thus increasing fare revenues. Due to the spatial development patterns in South Africa as a legacy of apartheid, travel distances are long and occur primarily in a single direction and primarily during peak periods. Transit-oriented development would help to create land use patterns that would drive more sustainable demand patterns.

A third focus area is on managing costs. The wall-to-wall bus system envisaged in the Public Transport Strategy (PTS) of 2007 has very high infrastructure and operational costs. In addition, this approach replaces the existing operators, largely minibus taxis, resulting in complex and costly transition and empowerment concerns. The realisation is emerging that this full replacement approach is not affordable, and misses an opportunity to leverage existing operators, as opposed to replacing them. Cities are starting to consider 'hybrid' approaches, which include existing operators and approaches that phase in subsidised bus operations and infrastructure more incrementally.

Finally, even with the above, unless dramatic changes in demand patterns materialise, national grant funding will be required to close the gap. The subsidisation of public transport operations and infrastructure is well established internationally, with international benchmarks suggesting subsidies of around 40% to 60% of total operating costs. Capital costs are often fully covered from government sources (DOT, 2012). Given the specific spatial legacy of South Africa, and the low ability to pay on the part of much of the public transport commuter population, similar levels of fiscal support should be expected.

4.5 Summary and Recommendations

A funding gap exists between what is required for urban municipalities to implement and manage public transport networks, versus the funding that is available. This is due to significant capital requirements, and significant operating shortfalls resulting from high costs and limited IPTN system revenues. The chapter has shown that if implemented efficiently, additional sources of income in large urban municipalities could provide additional sources of income for public transport functions. The most promising potential sources of income include the fuel levy, parking levies, parking tariffs and congestion charges. Advertising should also be pursued as a low-complexity opportunity. Some of these income streams also promote public transport objectives, incentivising mode shifts to public transport and contributing to the decongestion of urban roads. However, it is clear that these sources do not solve the funding challenge by themselves (with the exception of full retention of the fuel levy perhaps, noting the fiscal impact of this). Hence, national transfers to support public transport in large urban municipalities will still be required.

In addition, the chapter finds that the historical settlement pattern of South African urban municipalities and the current development patterns resulting in urban expansion need reversal to address the fundamental revenue cost challenge introduced by the current long travel distances and uni-directional flow. Finally, it would appear that the current model of implementing the Public Transport Strategy is unaffordable. Instead, public transport costs should also be reduced and implementation approached incrementally to close the remainder of the funding gap.

With the need to enhance urban transport efficiency and mobility, the Commission recommends that:

1. The Department of Transport should review the Public Transport Network Grant; investigate options to shift sources of funding towards retaining locally-earned fiscal revenue, and ring-fence the local income sources for public transport use. Examples include possible retention of a larger portion of the fuel levy generated in the municipality.

    a) Develop case studies or support pilot projects in selected municipalities to develop key potential sources of funding including funding related to parking, developer charges and ring-fencing a portion of the fuel levy.

2. The Department of Transport should approve and pilot the consolidation of public transport functions as defined in the National Land Transport Act within a well-capacitated city, with supporting funding (in line with a previous Commission study). In this regard, the Department of Transport should:
    a) Identify the most appropriate options for arrangements outside of large urban municipalities where financial resources and capacity to take on the integrated function are more limited; and
    b) Identify the legal and institutional structures needed to properly integrate planning and management across modes (including rail) into the broader management of municipal transport networks, which are also adequately funded by a conditional grant.

3. The Department of Transport should support the development of approaches to Integrated Public Transport Networks that support financial sustainability. These approaches should focus on leveraging the strengths of existing services, promoting incremental improvement of public transport based on affordability and impact, recognising the significant role that new technologies will play in providing demand-responsive services, and considering alternative models of industry transformation. This could take the form of piloting and sharing learning from revised approaches to Integrated Public Transport Networks in one or more urban municipalities and should be funded through the Integrated Public Transport Network Grant or a similar funding instrument.


FINANCIAL
AND FISCAL
COMMISSION
For an Equitable Sharing
of National Revenue

FINANCIAL
AND FISCAL
COMMISSION

For an Equitable Sharing
of National Revenue

Chapter 5

Aligning Urban Housing Supply and the Unhoused Urban Population

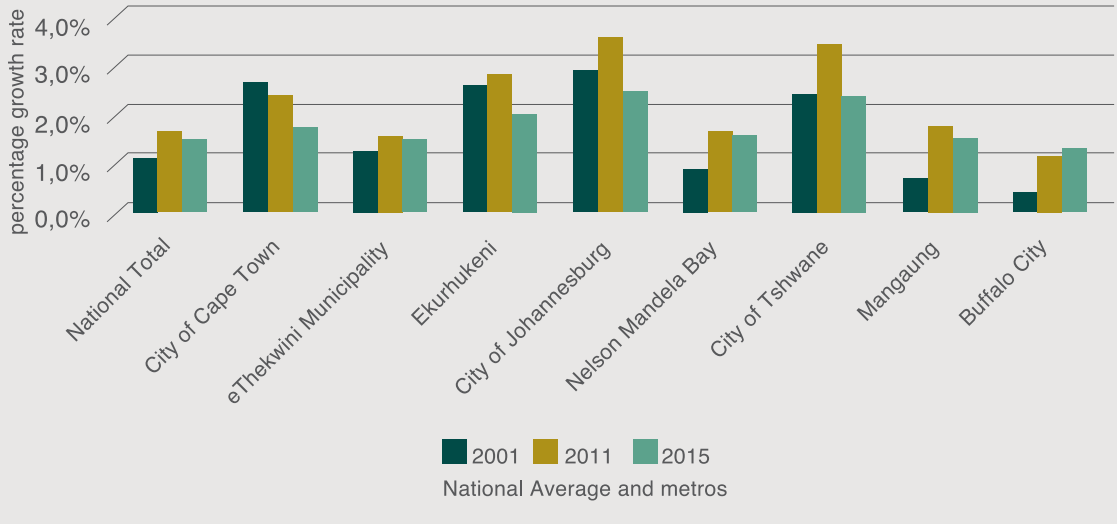
Chapter 5: Aligning Urban Housing Supply and the Unhoused Urban Population

5.1 Introduction

The right to adequate housing is enshrined in South Africa's Constitution and the government is obliged to take reasonable actions towards ensuring the progressive realisation of this right.[15] In 1994 the democratic government inherited huge housing backlogs. Since then a number of housing delivery programmes have been implemented in an attempt to improve housing conditions, particularly for the poor households (defined as those earning from R0 – R15 000 per month). The housing policy funding framework and housing delivery programmes have evolved along with changes in households' needs and changing government priorities.

While measurable progress has been made with respect to the provision and improvement of housing conditions, backlogs remain particularly within the metropolitan municipalities. Apart from natural population growth, in-migration and migrants from other countries, housing needs are exacerbated by the higher urban population growth rate. It follows that as urban population increases for a given residential stock, cities experience a shortage of habitable residential housing units leading to challenges such as overcrowding, poor living conditions and homelessness. The mushrooming of informal settlements and the number of households residing in inadequate housing conditions in the cities are some of the indicators of the extent of housing needs and affordability issues. Informal settlements and backyard rentals are common in cities and are areas of reception for households as they arrive in cities searching for job opportunities that will enable them to move to better residential structures. Figure 21 illustrates that most metros have been growing more than the national average since 2001 (particularly all metropolitan municipalities in Gauteng and the City of Cape Town).

Figure 21. Percentage of population growth in metros from 2001 to 2015

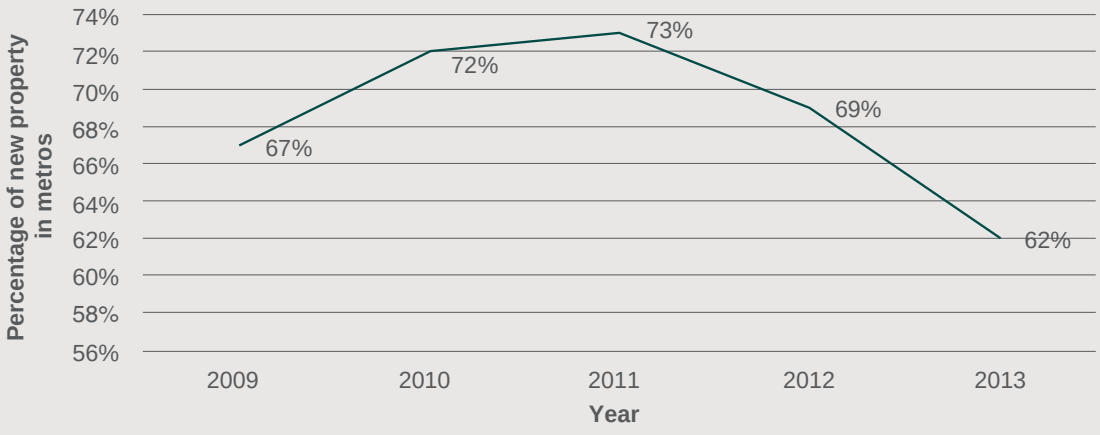


Source: Statistics South Africa.

Growth with respect to the number of households in metros implies the need for additional housing stock to match it. However, data shows that the number of new properties registered in metros has been declining in recent years (Figure 22).

15 According to the Constitution, housing is a concurrent Schedule 4A function between the national and provincial spheres of government with local government playing a key role. The Housing Act of 1997 provides clarity on the roles and responsibilities of different spheres of government with respect to the housing function and provides for the national and provincial governments to assign the housing function to municipalities accredited in terms of the Housing Act.

Figure 22. Percentage of new property in metropolitan municipalities



Source: Centre for Affordable Housing Finance (2015).

While Figure 21 illustrates an increasing trend in the number of households in metropolitan municipalities, Figure 22 illustrates a decreasing trend with respect to the percentage of new properties produced and registered. This indicates that there is a gap between the percentage growth in households and the percentage growth in housing delivery.

One of the biggest tasks for metros is to understand the implications of urbanisation on housing delivery for various income groups within the changing socio-economic environment and against the housing supply. However, for metros to be able to plan fully and effectively to respond to these challenges they need to have control of the housing function and be able to align housing delivery plans to other land and municipal infrastructure plans and projects including transport infrastructure.

A number of housing finance initiatives have been implemented recognising the unique nature of metropolitan cities with respect to the delivery of human settlements. These include the introduction of the Urban Settlements Development Grant, the process of accreditation and the Finance Linked Individual Subsidy Program (FLISP). Previous efforts to revise these policies and funding mechanisms have largely failed to yield anticipated results and progress on institutional changes, which includes accreditation, has stalled. To date not even a single metro that has been accredited at level three that signals the full housing function shift.

The aim of this chapter is to understand the implications of urbanisation on housing needs and constraints affecting the ability of metros to plan and respond to these housing needs. The study seeks to understand the growth in metropolitan municipalities and their associated housing needs, as well as examine constraints in the current housing policy and funding affecting the ability of metropolitan municipalities to plan and respond to the pressures of urbanisation.

5.2 Research Methods

The study uses both qualitative and quantitative methods. The quantitative analysis uses a combination of budget analysis techniques and standard statistical computations. Data from the Deeds Office on property sales, registration and valuation models were used to estimate the current value of residential properties. The valuation models utilised are credible and are also used by commercial banks. The Deeds Office data has also been used to identify new developments registered and densifying areas. However, this data will not cover informal settlements as they are not registered with the Deeds Office. In order to ensure that informal settlements and backyard 'granny flats' were not missed, GEOTERRAIMAGE was used to provide human settlement mapping solutions. Temporal spatial data is used to provide insight into settlement change and urban growth patterns over time, specifically indicating the transformation of areas where human settlement takes place, as well as population density changes. This offers an opportunity to describe the spatial effects of urbanisation and densification over time. One challenge is to account for and distribute social rental units but as the total number of social rental housing units across South Africa is only 18 580 (Social Housing Regulatory Authority, 2016) this will not make a material difference in the number of reported unhoused households.

With respect to population data, 2011 Census data has been used as a base and 2016 mid-year population estimates have

been used to update the population figures. Mid-year population estimates are provided at a provincial level and modelled down to a lower enumerator area. In areas where new formal housing stock has been built, the population in that area is grown to occupy the stock unless unhoused households exist and in that case an assumption is made that unhoused households are moved into the new housing stock provided the income of unhoused households correlates with the value of new housing stock. Furthermore, where new housing subsidy stock has been built allowance is made for backyard shacks. Population growth over and above what can be accommodated for in new formal property and assumed backyard shacks is assumed to be opting for informal settlements.

Income group categories used in the report for the affordable market differ from the target group for government housing policies. Differences between income groups used in the study and government's housing income groups as in the current housing policy are shown in Table 16 and it can be concluded that income groups used are close to the ones used for housing policy targeting.

Table 16. Income groups classification for housing affordability

Income groups used	Government classification
R0 – R2 000	R0 – 3 500
R2 000 – R4 000	R3 500 – R15 000
R4 000 – R9 000	
R9 000 – R17 000	

Source: Lightstone Explore Demprokey data, Statistics South Africa, 2011, Deeds Office data, Lightstone Property base.

Broadly, government housing policies mainly target two income groups for direct intervention, namely those earning between R0 and R3 500 per month (fully subsidised income group) and those earning between R3 501 and R15 000 per month (targeted through FLISP). Currently there is an ongoing debate with respect to the affordable housing market and what constitutes the housing 'gap market'. Given house prices and income levels, some argue that the gap market ranges from those earning between R3 500 and R18 000 per month (affording a housing unit of about R440 000) (Centre for Affordable Housing Finance, 2009). Given current debates on housing affordability and increasing house prices, inflation and interest rates it is clear that the housing gap market begins above R3 500 and goes beyond R15 000 which is currently FLISP's range. In fact, one may argue that FLISP was considering fiscus affordability and sustainability. For these reasons, among others, this chapter in its analysis has adjusted the housing gap market from R3 500 to R4 000 per month up to households earning R17 000 per month. While this is R2 000 higher than FLISP currently provides for, it is R1 000 below what has been suggested and provides policy makers with an idea of the implications should the upper ceiling of FLISP be adjusted slightly as suggested. In order to understand differences within the housing gap market, the chapter further divided the market into two groups, those earning R4 000 – R9 000 and those earning R9 000 – R17000 per month.

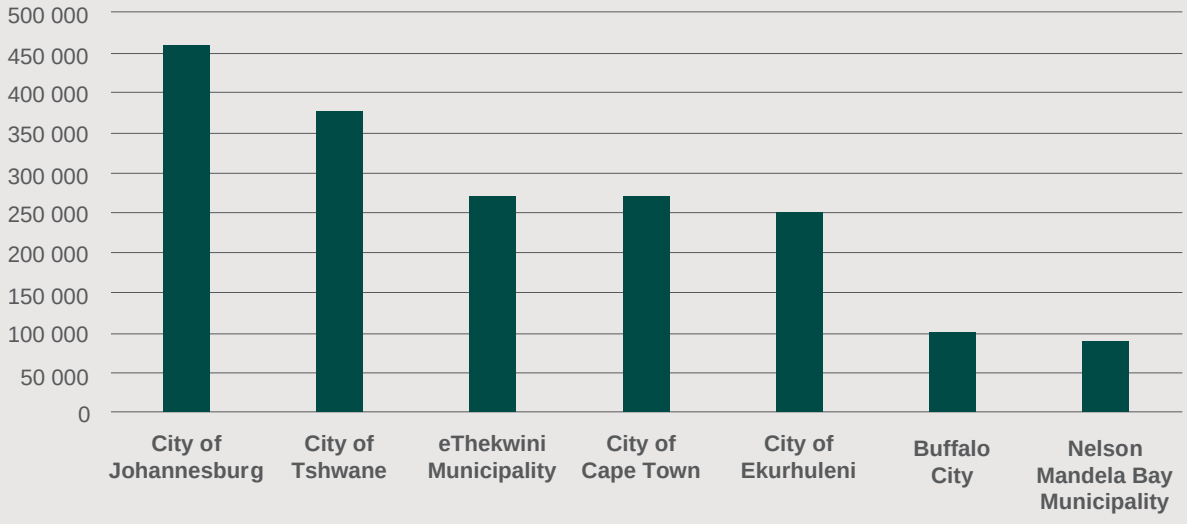
The qualitative method involved engagements with officials from selected metros. Two metros were chosen for this purpose, the City of Johannesburg and the City of Tshwane. The City of Johannesburg was chosen because its population increased more than any other metro between 2011 and 2016 and the City of Tshwane was chosen because of its proximity and availability. Engagements were in the form of open-ended questions. The primary reason for the interviews was to understand the current role played by metros in the planning and delivery of housing and the ideal role that metros should be playing in the human settlements sector as well as further understanding some of the key constraints they face in the process of housing delivery.

5.3 Findings and Discussion

5.3.1 Population growth in metros and implications for housing

Figure 23 illustrates how metropolitan municipalities have been growing by comparing population figures for 2011 and 2016. There has been population growth in all metros over the period, with Nelson Mandela Bay having the least growth of just below 100 000 while the City of Johannesburg has had the highest growth of about 450 000.

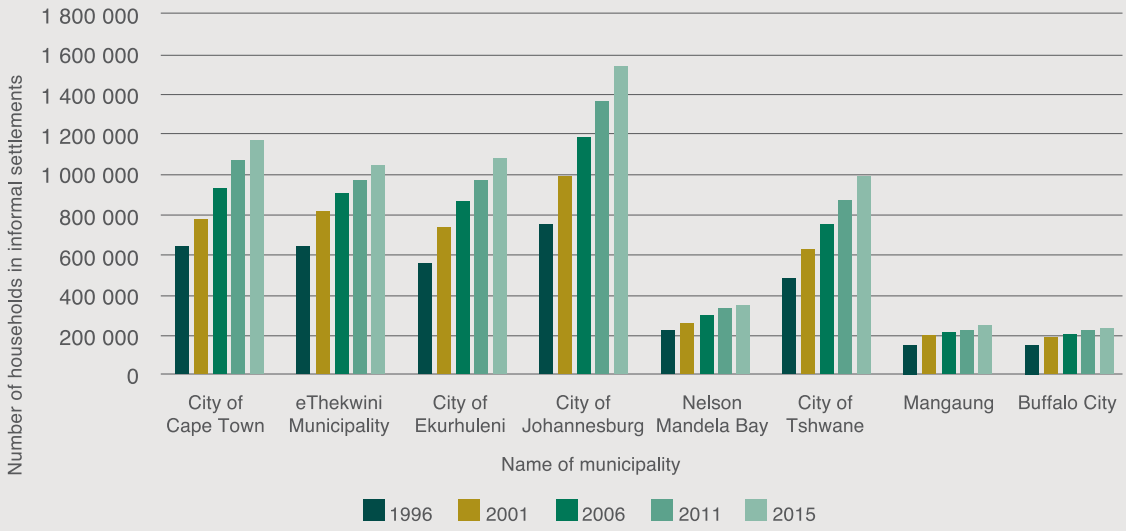
Figure 23. Population growth in metros, 2011-2016



Source: Lightstone Explore Demprokey data, Statistics South Africa, 2011, Deeds Office data, Lightstone Property base.

Figure 24 shows that the total number of households residing in inadequate housing conditions in metros is far above the national average. The City of Johannesburg experienced much higher growth with respect to households residing in informal settlements over 1996 and 2015 than any other metro followed by the City of Cape Town. The figure also shows the increasing rate of households residing in informal settlements across the board. Taking population growth and growth in informal settlements for the City of Johannesburg, illustrated in Figure 24, it can be deduced that quite a significant proportion of the population growth shown in Figure 23 is made up of poor individuals who struggle to qualify for mortgage bonds and opt to reside in informal settlements. This indicates that even metros are failing to plan for urban growth and its associated housing needs.

Figure 24. Number of households residing in informal settlements in metros



Source: Statistics South Africa.

To buttress this point, Table 17 shows that there is a large number of households residing in inadequate housing conditions in metros despite government providing housing and housing opportunities.

Table 17. Number of households in inadequate housing conditions

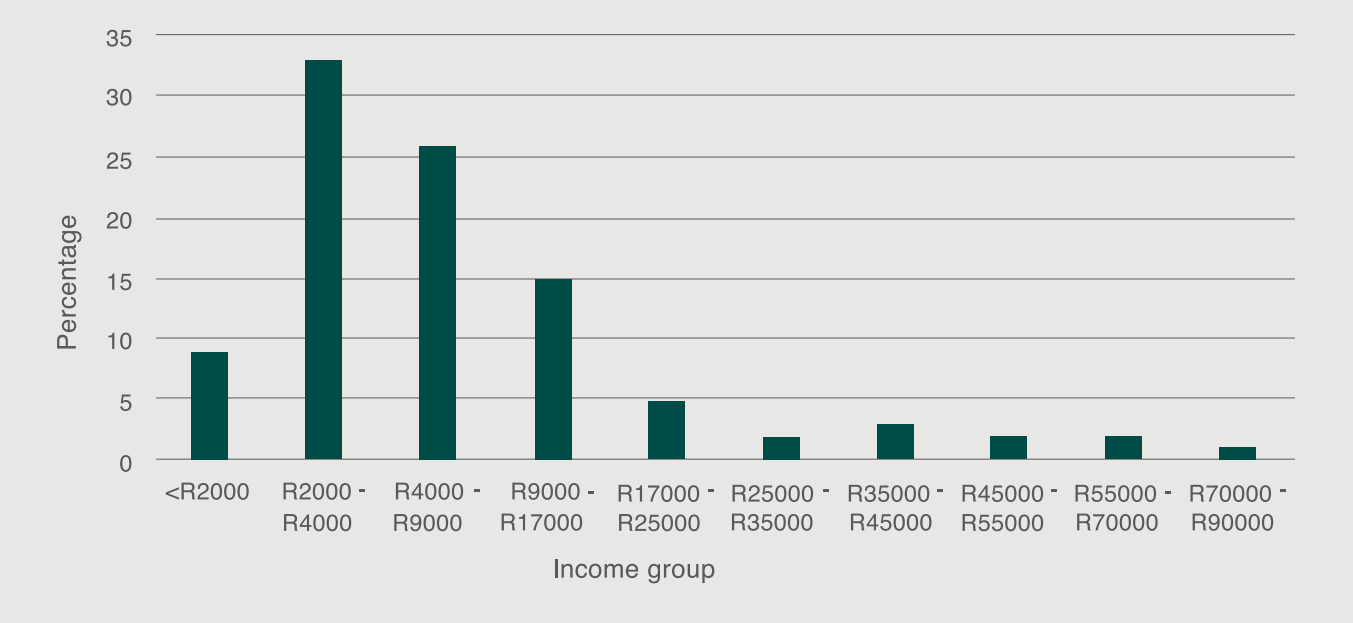
Name of a metro	Informal dwelling (shack, in backyard)	Informal dwelling (shack, not in backyard; e.g. in an informal settlement or on a farm)	Room/flat let on a property or larger dwelling/servants quarters/granny flat
Buffalo City	10 896	38 895	1 122
Nelson Mandela Bay	8 862	29 997	1 845
Mangaung	8 265	24 480	1 323
City of Ekurhuleni	80 160	138 099	11 847
City of Johannesburg	124 077	125 748	20 442
City of Tshwane	51 846	112 167	7 689
eThekwini	37 980	111 306	6 465
City of Cape Town	74 955	143 823	10 212
National average	2 519	4 416	420

Source: Statistics South Africa 2011.

5.3.2 Profiling households and affordability

A bigger proportion of South African households earn below R17 000 per month, the lower income group targeted by the government housing policy (Figure 25). A significant percentage within the target group earn between R2 000 – R4 000 and R4 000 – R17 000 per month. As discussed earlier, while this grouping is not defined exactly according to the housing policy, the majority of households in these two groups fall under the housing gap market targeted by the FLISP.

Figure 25. Percentage of total population by income category, 2016



Source: Lightstone Explore Demprokey data, Statistics South Africa, 2011, Deeds Office data, Lightstone Property base.

Affordability is mainly determined by a household's savings and income level and ability to borrow from banks. In order to determine affordability, it is assumed that a household can spend up to one third of its income either buying or renting a property. Therefore, the monthly repayment on a bond is typically 1% of the value of a property. Mapping of household income to the value of property is summarised in Table 18. Households earning under R4 000 per month normally qualify for RDP housing units, but if they were to buy properties they would qualify for housing units worth up to R130 000. The table shows that those households who are mainly within the gap market qualify for housing units worth between R300 000 and R565 000.

Table 18. Aligning household income groups and property values

Monthly Household Income	Property Value
R4 000	RDP or R130000
R4 000 – R9 000	R130 000 – R300 000
R9 000 – R17 000	R300 000 – R565 000
R17 000 – R35 000	R565 000 – R1.15mil
R35 000 – R45 000	R1.15mil – R1.5mil
R45 000 – R55 000	R1.5mil – R1.8mil
R55 000 – R70 000	R1.8mil – RR2.3mil
R70 000 – R90 000	R2.3mil – R3mil
R90 000 – R115 000	R3mil – R3.8mil
R115 000 – R135 000	R3.8mil – R4.5mil
135000	R4.5mil

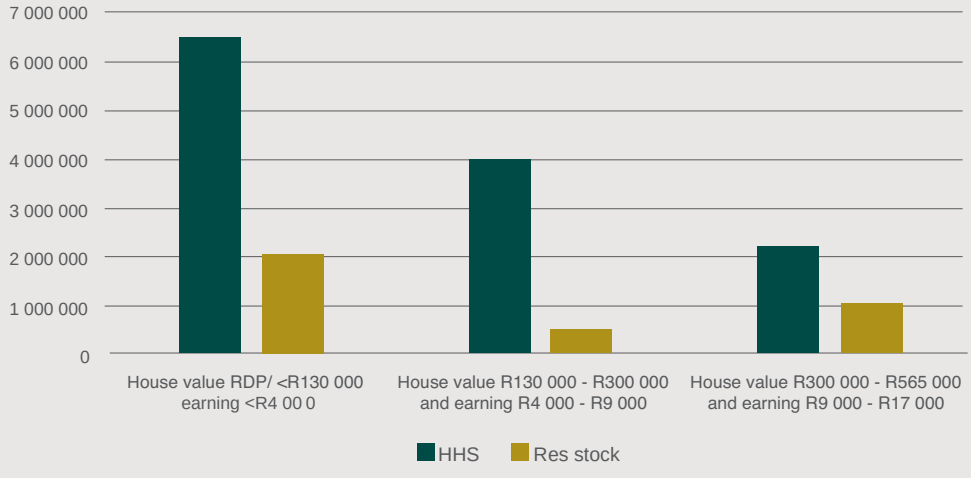
Source: Lightstone Explore Demprokey data, Statistics South Africa, 2011, Deeds Office data, Lightstone Property base.

In summary, a large number of households fall within an income group earning below R17 000 per month and relying on government's assistance. This is likely to remain so given the slowdown in economic growth discussed in chapter 1, increasing inflation that leads to upward adjustments of interest rates and increasing house prices, which this group could qualify for. The latter is further discussed and demonstrated in the following sections.

5.3.3 Aligning household income and housing stock

While Table 18 aligned households' income levels and property values households qualify for, Figure 26 aligns income level to residential available stock in order to determine existing gaps. There are more than six million households earning less than R4 000 per month and around two million properties under the value of R130 000. While this is a problem within the income group earning less than R4 000 per month, the biggest problem is in the household income group earning between R4 000 and R9 000 per month as residential stock is too low compared to the number of households. For the household group earning between R9 000 and R17 000, the challenge does exist but is not as serious.

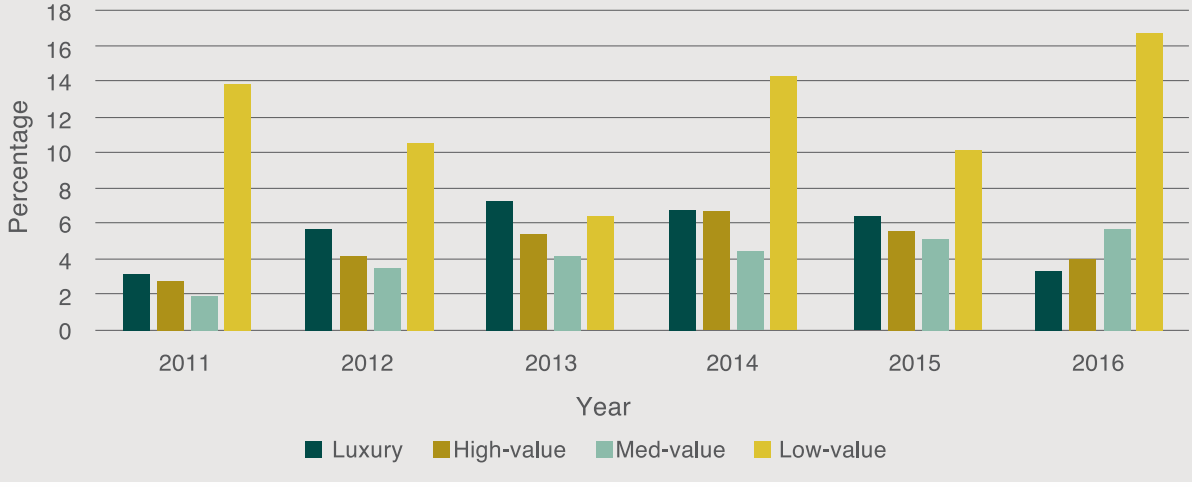
Figure 26. Household and residential stock



Source: Lightstone Explore Demprokey data, Statistics South Africa, 2011, Deeds Office data, Lightstone Property base.

Related to the availability of residential housing stock are average housing prices and inflation. In theory, if housing demand outstrips supply, house prices on average will increase at a relatively faster pace resulting in higher housing inflation. This appears to be the case with respect to lower income housing as illustrated in Figure 27 where the mid-value and low-value housing are experiencing a higher inflation rate compared to high-value and luxury housing.[16]

Figure 27. Inflation rates over based on housing values, 2011-201617



Source: Lightstone Property, 2016.

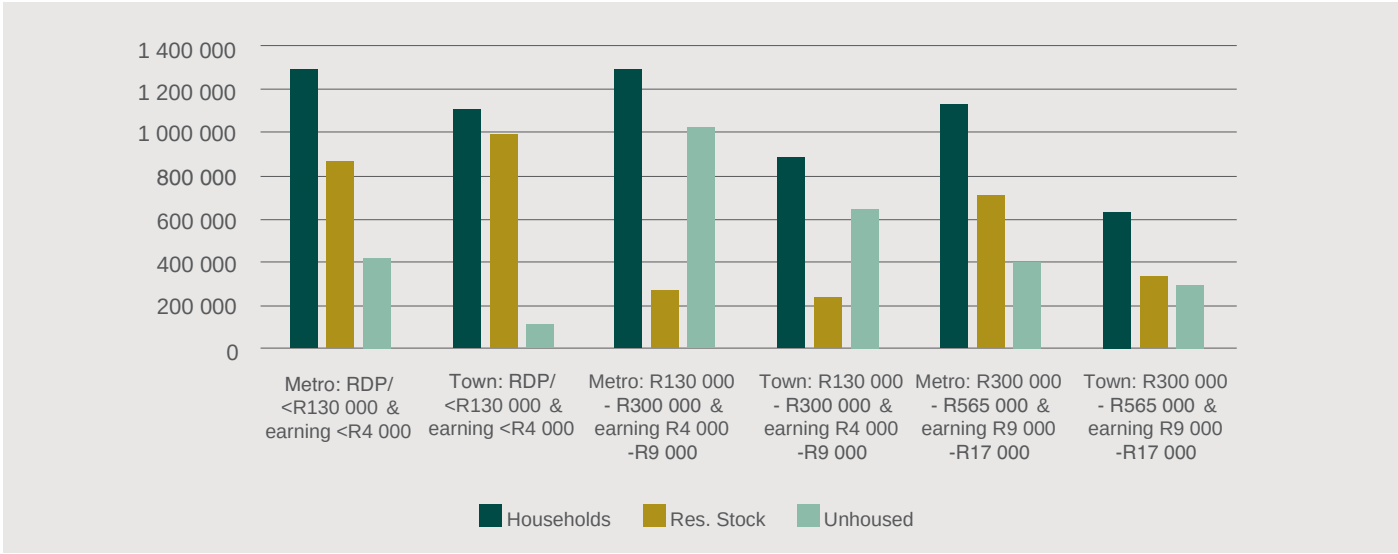
16 Luxury housing is in excess of R1.5 million, high-value housing is between R700 000 and R1.5 million, mid-value housing is between R250 000 and R700 000 and low-value housing is less than R250 000.

17 2016 is based on three quarters.

5.3.4 Housing gap

Figure 28 illustrates housing stock available in both metros and secondary cities and aligns housing stock to different households' income groups. It also illustrates the number of unhoused households. According to the figure, the highest number of unhoused households is within the group earning between R4 000 and R9 000 per month both in metros and in secondary cities (for housing units valued between R130 000 and R300 000). For metros, the number of unhoused households is also high for those earning between R9 000 and R17 000 per month (housing units valued between R300 000 and R565 000). Thus, the biggest challenge with respect to unhoused households in metros is in the gap market (which FLISP seeks to address). Furthermore, within the gap market the biggest challenge is in households earning between R4 000 and R9 000 per month (the lower end of the gap market). Therefore, this is the group that FLISP ought to prioritise within the gap market.

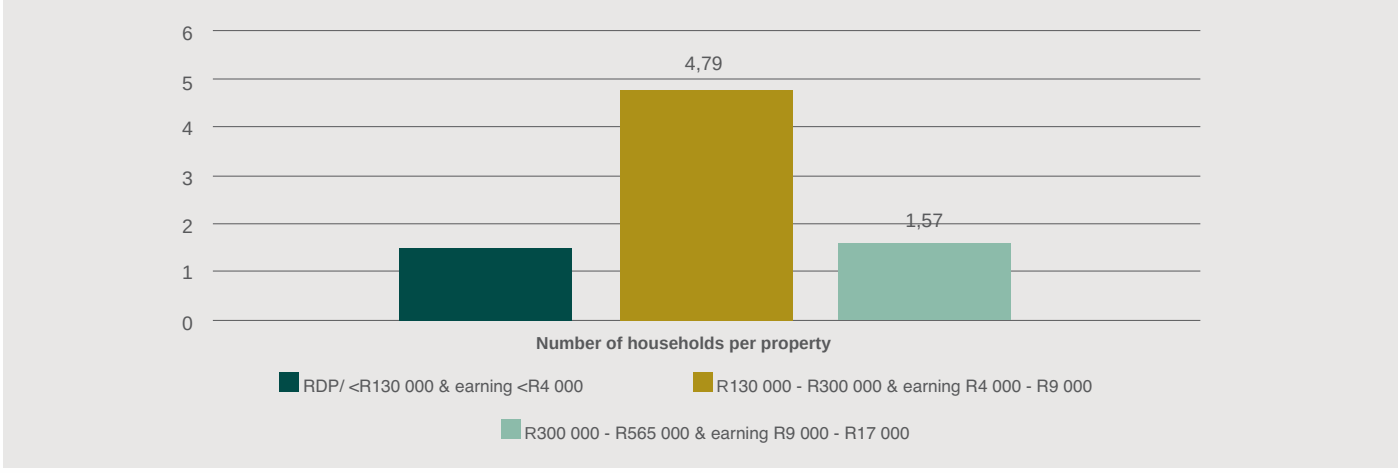
Figure 28. Unhoused households in metros and secondary cities



Source: Lightstone Explore Demprokey data, Statistics South Africa, 2011, Deeds Office data, Lightstone Property base.

The bigger challenge in the lower end of the gap market in metros is also illustrated in Figure 29 which shows the number of households per property. The higher the number of households per property, the bigger the problem and this is the case with respect to the income group earning between R4 000 and R9 000.

Figure 29. Number of households per property in metros



Source: Lightstone Explore Demprokey data, Statistics South Africa, 2011, Deeds Office data, Lightstone Property base.

5.3.5 Analysis of FLISP performance

FLISP was established to be part of the solution to the housing gap market. Its objective was to reduce the initial mortgage in order to make monthly loan repayment instalments affordable. Targeted beneficiaries are those earning between R3 501 and R15 000 per month and their subsidy from FLISP is on a sliding scale from R20 000 up to R84 000. The FLISP policy currently provides for married or cohabiting as well as single qualifying households provided the latter proves he/she has financial dependents. A single individual who does not or cannot prove that they have financial dependents is not covered and is currently excluded from the subsidy. Furthermore, while the policy is clear with respect to the implementation of the programme through the National Housing Finance Corporation, it is implemented differently by provinces and not according to the policy prescripts resulting in a lack of standardised programme implementation. When assessed by comparing what the programme intended to achieve over the Medium Term Strategic Framework (MTSF) and what it has achieved thus far, the program has performed badly over the years as shown in Table 19.

Table 19. Performance of finance linked individual subsidy programme

Province	2014/15	2015/16	2016/17 (up to 3rd quarter)	MTSF Target
Eastern Cape	324	243	125	3 620
Free State	10	53	0	4 095
Gauteng	420	447	733	27 850
KwaZulu-Natal	207	365	128	5 827
Limpopo	58	58	164	2 290
Mpumalanga	8	32	20	4 240
Northern Cape	0	0	8	1 482
North West	0	24	17	9 018
Western Cape	168	411	331	11 578

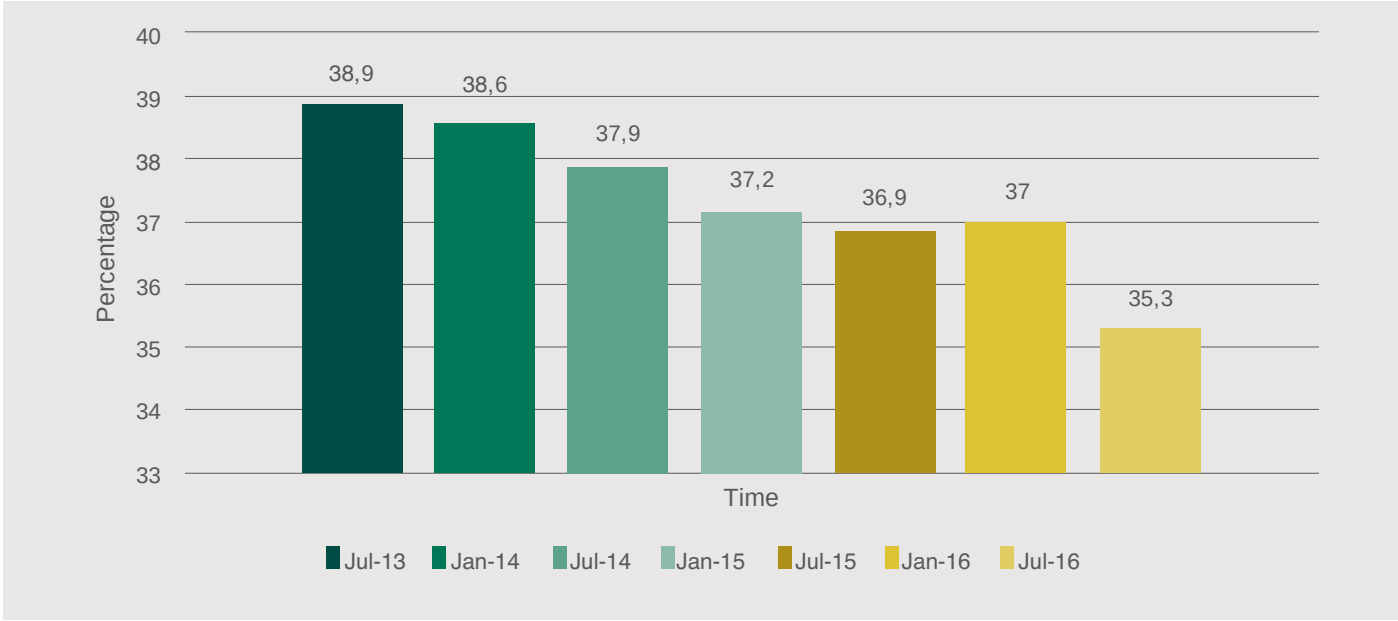
Source: National Department of Human Settlements.

There have been a number of challenges affecting the performance of FLISP contributing to its ineffectiveness and failure to deliver on targets. These challenges include the high levels of indebtedness of the target beneficiaries and the budget and funding inconsistency by provinces.

a) High level of indebtedness

Creditworthiness is one of the key factors of FLISP as a qualifying household has to also apply for a mortgage bond from commercial banks to cover the difference between the subsidy amount and the actual house price. Unfortunately, due to high levels of household indebtedness particularly within the target group, a number of qualifying households are failing to have access to mortgage bonds. A study by the Financial and Fiscal Commission in 2013 revealed that the impact of poor credit-worthiness undermines the overall impact of any intervention relying on credit. Little has changed with respect to the level of indebtedness since then although there is a slight improvement of 3.6% between July 2013 and July 2016 on the overall households' debt/GDP level (Figure 30). Furthermore, the Gauteng City-Region Observatory Quality of Life Survey report for 2015, which compared changes to the level of households' indebtedness between 2013 and 2015, revealed that lower income groups' (i.e. those earning between R0 – R1 600 and R1 601 – R12 800 per month) levels of indebtedness increased at a higher rate than higher income groups, with an increase of 11% and 9% respectively, while the level of indebtedness in higher income groups remained relatively constant. Therefore as the high levels of indebtedness that intended qualifying beneficiaries have, the programme will only be effective if implemented with a debt rehabilitation program.

Figure 30. Level of households' indebtedness



Source: Trading Economics.

b) Funding inconsistencies across provinces

FLISP is a national housing programme implemented by provinces. The funding for FLISP is the prerogative of provinces, with provincial departments of human settlements deciding how much funding to allocate for the programme in a financial year. This results in inconsistencies in the way the programme is funded across provinces as shown in Table 20.

Targets set per province should guide them on their allocation of funding for the programme. However provinces do not utilise set targets, but instead using their discretion with insufficient funding to attain set targets. Furthermore, there is a lack of transparency as funding initially allocated for the programme by provinces can be utilised for other programmes during the financial year as funding for FLISP is not ring-fenced. However, it would be difficult to recommend a percentage of the funding that should be allocated for FLISP as provincial housing needs and conditions differ from province to province.

Table 20. Provincial allocations for FLISP and annual growth rates (%)

Province	2013/14 R'000	Annual Growth Rate	2014/15 R'000	Annual Growth Rate	2015/16 R'000	Annual Growth Rate	2016/17 R'000
Eastern Cape	20 565	-0.76	4 997	1.49	12 442	-074	3 249
Free State	1 597	2.43	5 480	-0.07	5 100	-0.06	4 800
Gauteng	57 457	-0.87	7 567	12.37	101 169	-0.44	56 536
KwaZulu-Natal	99 796	-0.85	14 806	4.52	81 750	0.17	96 000
Limpopo	4 350	4.8	25 230	-0.03	24 900	-0.15	21 248
Mpumalanga	2 500	1.79	6 975	0.25	8 700	-0.20	6 960
Northern Cape	2 905	-1.12	-	-	2 182	0	2 182
North West	27 845	-0.92	2 058	10.35	23 359	-0.74	6 078
Western Cape	-	-	4 500	0.39	6 250	8.23	58 050

Source: National Department of Human Settlements.

5.3.6 Constraints on metros to adequately respond to housing needs

Engagements with the City of Johannesburg and the City of Tshwane regarding key constraints on housing delivery relate in the main to intergovernmental relations, uncoordinated programmes and project plans as well as unaligned sector infrastructure delivery plans, scarce or unavailable developable land for of housing and challenges regarding the management of the housing list including queue jumping. These are discussed below.

a) Intergovernmental relations

Once funding for housing has been decided and made available, the province has to decide and gazette allocations to municipalities using its own discretion, with no consultation with municipalities. One of the metropolitan municipalities revealed that what the province promises to allocate sometimes differs from what actually gets allocated and gazetted. In such instances, municipalities find themselves in situations where they are forced to re-adjust and change their budgets and housing delivery plans and targets. Failure to gazette, and late allocations to metros, are some of the challenges experienced.

Institutional challenges within the housing sector have been in existence for some time and this has been shown by the Financial and Fiscal Commission's previous research work to be one of the major constraints on housing delivery. The Commission has recommended housing function assignment and function shift to those municipalities that have capacity to deliver on the housing function, particularly metros. The first recommendation on accreditation was made in 2008 but to date there has not been even one municipality accredited to level 3. Uncertainty has been created within the intergovernmental relations system with respect to the housing function shift or assignment ranging from stopping transfers of funding meant to assist metros on capacity building in preparation for functions shift and changing the original purpose of the Human Settlements Capacity Grant to entirely change the framework for accreditation/function shift.

b) Unaligned housing programs and project plans between provinces and municipalities

Local government as the sphere of government closest to the people understands housing needs and pressures including housing typology and tenure. Municipalities then are better placed to understand the nature of housing needs and pressure areas than provinces. Engagements with metros indicated that the role of metros in the current arrangement is reduced to the implementation of projects that have been decided by the province. Housing delivery plans for the province and metros are not necessarily aligned with each other. Some of the projects where priorities differ between metros and the province are with respect to the upgrading of hostels. The province may prioritise the upgrading of hostels whereas metros would prefer a mix of hostel upgrading and affordable rentals based on their understanding of housing needs. The province also prioritises mega projects, which are not a priority according to metros. Furthermore, there is no flexibility on where funding from the province could be utilised as it is for a specific project, in specific areas and for a specific type and number of housing units to be delivered. The role of municipalities and metros is to implement what has been decided by the province and provide reports.

a) Unavailability of land for human settlements and managing housing waiting lists

Engagements with metros revealed that the availability of developable land suitable for housing development is very limited in the cities and in most cases is not owned by government. The Housing Development Agency plays a key role in negotiations and acquisition of land for housing developments but because of the price of land and limited resources, land for housing developments remains a problem. This is exacerbated by the existence of dolomitic land in some areas rendering land not suitable for housing developments and in some instances households have to be removed from dolomitic land and relocated to other areas. The process of relocating households from settlements located in land with dolomite and court orders with respect to eviction[18] compromise housing delivery plans and the housing waiting list as such households have to be prioritised.

18 Engagements with metros revealed that due to the long processes required to implement housing projects after the land has been identified for housing, households may take advantage of the situation and occupy the land knowing the legislation will require them to be provided with alternative accommodation if they are evicted.

5.4 Summary and Recommendations

South African metros are experiencing population growth which is attributed largely to urbanisation. They find themselves under pressure to upscale the delivery of infrastructure including adequate housing. A high number of unhoused households within metros, particularly in the gap market, indicates an insufficient supply of housing units, a lack of affordability or housing policy and funding failures. Furthermore, delivery of habitable human settlements needs a strong coordination of inter-sectoral infrastructure delivery plans including the delivery of schools and public transport that is currently lacking.

With respect to matching housing supply to the needs of the growing urban population, the Commission recommends that:

1. The Department of Human Settlements should undertake a review of the Finance Linked Individual Subsidy Programme to find ways of ensuring that qualifying individuals who are single and without dependants are included as beneficiaries from the programme and that the Finance Linked Individual Subsidy Programme is implemented in a standardised manner across provinces.
2. Provincial departments of human settlements and other key departments including the provincial departments of basic education and transport should align their infrastructure delivery plans particularly for new human settlements development. This can be done by:
    a) Establishing functional inter-sectoral coordination committees where relevant departments will meet to discuss new infrastructure development projects relating to habitable human settlements.
    b) Ensuring that the portion of the Education Infrastructure Grant and funding from the Provincial Equitable Share are aligned to the portion of the Human Settlements Development Grant for new housing developments.

FINANCIAL AND FISCAL COMMISSION

For an Equitable Sharing *of National Revenue*

Chapter 6

Implications of Urbanisation-Induced Learner Mobility on Education Planning and Funding

Chapter 6: Implications of Urbanisation-Induced Learner Mobility on Education Planning and Funding

6.1 Introduction

The spatial distribution of learners in South Africa is following urban development patterns. Open school-choice policies enable learners to switch schools within and across municipal and provincial boundaries following migration patterns and in pursuit of better education opportunities. Mobility occurs at different levels and in various ways influenced by the travel distance between learners and the school, whether learners attend school within their geographic area of residence and origin, and whether leaners attend their nearest grade-appropriate school (de Kadt, 2011). [19] Inter-regional learner mobility has implications for the distribution of education fiscal transfers, utilisation of education infrastructure, and overall planning for education delivery (Torre and Gwynne, 2009, de Kadt, 2011, Simelane, 2014).

Gustafsson (2016) indicates that schooling population and infrastructure are becoming increasingly concentrated within the key urban areas. Metropolitan areas are experiencing greater growth in learner enrolments and the learner density patterns within the traditional rural spaces are also concentrating around key economic corridors. The reasons for an urbanising schooling population range from those associated with parent and labour migration to perceptions of higher quality education in urban areas. Problems include limited good schools with demands on them by a large number of people. The poor quality of rural education, and the closure of schools in rural areas has also been found to reinforce learner mobility (Msila, 2005).

A rapidly urbanising school population has potentially adverse fiscal implications for the entire education system. On the planning front, urbanisation results in the simultaneous underutilisation of schooling resources (such as teachers and infrastructure as a result of the closure of schools) for the sending areas and overcrowding in receiving areas. On the funding front, learner mobility affects the distribution of allocations to provinces and their budgets, leading to underfunding in the sending areas and funding pressure in receiving areas where there is likely to be overcrowding and the need for more classes, because the allocation framework for education funding (at provincial and school level) is tied to learner distribution patterns.

This chapter is concerned with mobility patterns that involve the movement of learners between jurisdictions (between and within districts and provinces).20 It addresses the following questions:

a) To what extent are education fiscal transfers, i.e. the provincial equitable share[21] (PES) and conditional grants, sensitive or responsive to learner mobility?
b) What are the provincial budgetary and planning processes for managing learner mobility?

The chapter evaluates the extent to which education fiscal transfers are affected or responsive to the urban transformation process and the efficacy of provincial planning processes for addressing education delivery challenges induced by urbanisation. To the best of our knowledge, most of the South African studies on learner migration have been qualitative, focusing largely on the pull and push factors. This study provides both fiscal and budgetary dimensions of learner mobility within a broader context of intergovernmental basic education delivery architecture.

19 Sayed (2008), Neluvhola (2007), and Simelane (2014) give historical background on learner mobility in South Africa.
20 Measuring learner mobility at localised or neighbourhood level is riddled with challenges of aligning school districts and catchment zones with other administrative boundaries i.e. municipality, suburb names, electoral wards, census demarcations etc. (de Kadt, 2011).
21 PES is a constitutionally entitled unconditional fiscal transfer to provinces to fund the delivery of provincial functions or services. It accounts for over 95% of the total provincial revenue.

6.2 Patterns and Implications of Urbanisation for the School Population

Learner mobility can take different forms. Movement patterns are either localised, between schools in different settlement types within the same district, or regional, between schools in different districts but in the same province or between different provinces (Gustafsson, 2016). The reasons explaining learner mobility include those that are internal and external to the schooling environment. Internal factors may include a desire for quality education measured in terms of academic attainment of leaners, and aspirations to escape the shackles of poor education conditions. External factors include the socio-economic status of the learner's household, culture, religion, language and in some cases prestige (Lombard, 2009, Van der Merwe, 2011, Fiske and Ladd, 2006, and Torre and Gwynne, 2009).

Implications of learner mobility straddles various aspects of the education system from the classroom to education policy and planning, infrastructure and funding issues. At a classroom level learner mobility can impede effective learning especially when the teachers have to adapt methods of instruction to the new learners or implement an integrated continuous school curriculum (Torre and Gwynne 2009). Learner mobility causes overcrowding in receiving areas and simultaneous under-utilised classrooms in the sending areas, thus leading to closure of schools, planning difficulties in distributing education resources and suboptimal participation of parents in school affairs (Marais, 2016). [22]

On the funding side, learner mobility affects education budgets in two ways. First, through the revenue-sharing allocation mechanism (PES), which uses school-age population and school enrolment to determine each province's share of the provincial funding pool. Second, mobility affects funding allocated to individual schools for non-personnel non-capital (NPNC) expenditure, which is allocated on the basis of school enrolment levels and learners' socio-economic conditions. The fiscal implications of these movements are such that provinces or schools that enrol more learners gain revenue while sending provinces lose out.

6.3 Research Methods

The methodology used is multifaceted and entails (a) quantitative analysis of the extent of inter-jurisdictional learner mobility and its impact on education finances, (b) budget analysis of education fiscal transfers and (c) a case study detailing processes for managing learner mobility within an urbanised environment. The study focuses on three provinces, namely Gauteng (receiving province), Limpopo and Eastern Cape (sending provinces). Gauteng province was selected as it has the highest inflow of learners while the other two provinces are experiencing outflows. This gives an indication of the varying effect of learner mobility in both the receiving and sending areas. The selection of the three provinces does not suggest that other provinces are not experiencing learner mobility.

The dimension or measure of learner mobility used is the distribution of learners across provinces and districts using population proportions over time and learner density ratios where feasible. Other dimensions of mobility are not possible to measure with the available data. For instance, available education statistics do not have unique pupil numbers to identify areas in which learners reside and go to school. Further, education districts used by provincial education departments for administration are not always aligned to any other official boundaries i.e. municipal or census. The analysis is complemented by a range of descriptive and bivariate analysis, assessing the intensity of learner mobility across space and its relationship between the key determinants of school choice, in particular school performance.

The budget analysis commences with a review of the formulae for allocating education transfers to determine the extent to which school enrolment affects the allocations of both the sending and receiving provinces and districts. This is followed by an assessment of the grant responsiveness to the changing spatial distribution of the learners, particularly when it relates to pressures placed on school infrastructure or the resulting underutilisation thereof.

The case studies are used to gain an in-depth understanding of provincial processes for managing and planning for mobility. Aspects include, at what point does a province start planning for new enrolments and what factors do they consider. Also measures that are used for managing mobility — be it multi-grade teaching, closure or combining of schools — guide the inquiry.

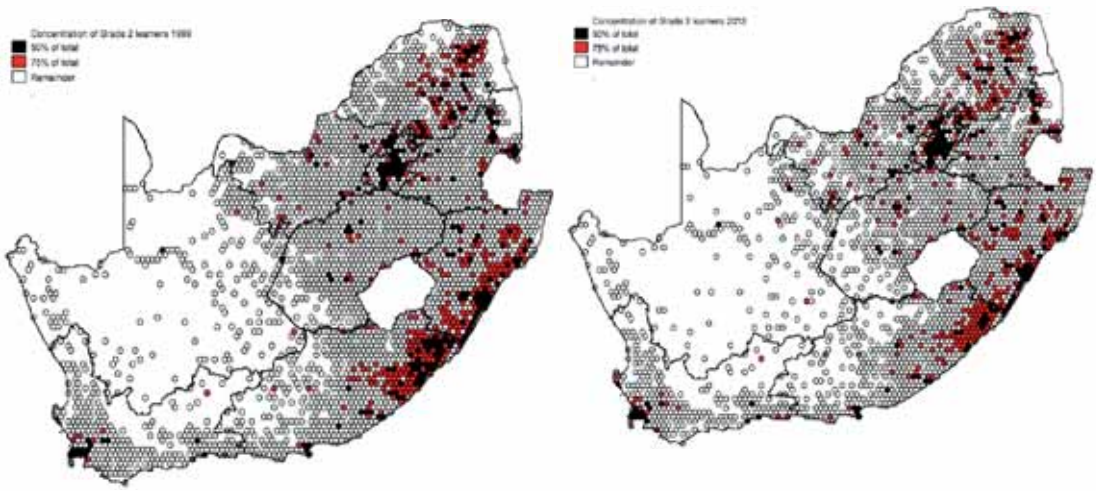
22 Also see Cowley et al, (2011) and du Plessis (2014).

6.4 Findings and Discussion

6.4.1 Inter-provincial learner mobility

Figure 31 illustrates the extent of learner concentration and movements between 1999 and 2013 using grade proportional density of Grade 2 learners. As can be seen there are three notable concentration nodes, including the eastern coastline covering Eastern Cape and KwaZulu-Natal, Gauteng and the northern parts of Limpopo. The extent of learner mobility is, however, not clearly evident from the map although one can potentially infer a rural-to-urban movement as indicated by the dense red dots along the key urban nodes.

Figure 31. Change in density of Grade 2 enrolments



Source, Gustafsson, 2016.

Table 21 provides a numerical assessment of learner mobility patterns across the nine provinces using a comparison of Grade 1 pupil distribution and density over time. Overall the picture that emerges suggests that four provinces in the main have experienced a significant change in the total share of Grade 1 pupil enrolment and density levels. Both Eastern Cape and Limpopo, which are typically rural, have experienced a net decrease while Gauteng and Western Cape are the main destinations of choice for migrating learners. For instance the total share of Grade 1 population in Gauteng increased from 12% in 2000 to 18% in 2015.

Table 21. Learner mobility — Grade 1 pupil distribution and density

	Gr 1 Pupil share		Gr 1 Pupil density	
	2000	2015	2001	2015
Eastern Cape	24%	16%	1.6	1.2
Free State	5%	5%	0.5	0.5
Gauteng	12%	18%	7.4	12.6
KwaZulu-Natal	18%	22%	2.9	2.8
Limpopo	22%	12%	1.1	1.2
Mpumalanga	7%	8%	1.1	1.4
Northern Cape	1%	2%	0.0	0.1
North West	6%	6%	0.8	0.8
Western Cape	5%	9%	0.5	0.9

Source: Commission's calculations.

Table 22 provides a further assessment of inter-provincial learner migration using the average learner enrolment and school-age population growth rate over time and computing the net reduction or increase in number of learners per province. Similarly to the finding above, Gauteng on average gained 75 000 learners per annum within its public schools while Eastern

Cape and Limpopo lost approximately 28 000 learners per annum. Other provinces experience changes in pupil movements but the magnitude of such shifts is small in comparison to the three identified provinces, and are consistent with natural population growth.

Table 22. Average net learner migration by province, 2000–2016

	Learner enrolment (average growth rate)	School-age population (average growth rate)	Net in/out migration %	Net in/out migration
Eastern Cape	-0.35%	-1.11%	-1.46%	-28 432
Free State	-0.36%	-0.90%	-1.26%	-8 564
Gauteng	1.95%	1.40%	3.35%	75 351
KwaZulu-Natal	0.32%	-0.41%	-0.09%	-2 601
Limpopo	-0.24%	-1.37%	-1.61%	-28 159
Mpumalanga	0.89%	0.53%	1.42%	15 283
Northern Cape	2.01%	1.66%	3.67%	10 624
North West	-0.57%	-1.33%	-1.90%	-15 439
Western Cape	0.88%	0.44%	1.32%	14 439

Source: Commission's calculations.

The extent of inter-provincial learner mobility differs in terms of the age structure. Table 23 shows that the movement of learners by age structure differs from one province to the other. In some cases, leaners tend to change original places of residence when reaching higher grades or secondary schools, while in other cases mobility declines with grade progression or higher age group. For instance, Gauteng province experienced a net in-migration of 37 000 pupils aged five to nine years compared to 105 000 aged 15 and 19 years between 2011 and 2015. Pupil age structure may affect the balance in the mixture of primary and secondary schools available per province.

Table 23. Net pupil migration by age structure, 2011-2015

Province	5 - 9 yrs.	10 - 14 yrs.	15 - 19 yrs.
Eastern Cape	-7 385	-22 837	-65 097
Free State	-3 666	-5 426	-4 128
Gauteng	37 325	52 765	105 495
KwaZulu-Natal	-6 385	-5 944	-17 009
Limpopo	-18 222	-23 528	-33 514
Mpumalanga	7 400	4 264	4 069
North West	16 800	12 693	12 198
Northern Cape	1 276	1 897	758
Western Cape	11 337	26 015	56 694

Source: Statistics South Africa, 2016.

Overall, the analysis above suggests that learner mobility patterns are following national migration patterns where Limpopo and Eastern Cape are the sending provinces while Gauteng and Western Cape mostly receive learners from the other provinces. As will be seen in the next sections, these shifts have implications for the overall funding of provinces because allocations are made on the basis of pupil numbers.

6.4.2 Intra-provincial learner mobility

Intra-provincial learner mobility patterns show high levels of variability across provinces, reflecting their unique spatial conditions and education dynamics. These movements affect the balance in the distribution of schools, learners and other education inputs within a province. Table 24 summarises the trends in learner movements across three provinces that have been found to display high learner migration. The table only analyses aggregate changes in the number of Grade 1 pupils without necessarily showing the destination of learners. In this regard, Gauteng education districts are experiencing an overall above-average enrolment growth rate for Grade 1 of 33%, with the exception of Johannesburg central and the outlying Gauteng North district where matriculation results are comparatively lower. The rapid increase in learner enrolment within Gauteng is attributable to migration from other provinces, in particular, Limpopo and Eastern Cape. The province indicates that the extent of intra-provincial learner movement amongst the currently enrolled learners is insignificant and broadly manageable. Learner mobility patterns of concern to the province relate to the growing rate of learner progression into higher grades, which invariably causes shortages in the number of classes for senior grades. Analysis indicates that the number of pupils reaching Grade 12 has been increasing with each age cohort.

Table 24. Grade 1 learner shifts by provincial education district, 2009–2015

	Gauteng	Limpopo	Eastern Cape
Total districts	14	10	23
Growing districts	14	3	6
Declining districts	0	2	14
Neutral	0	5	3

Source: Commission's compilation based on EMIS database.

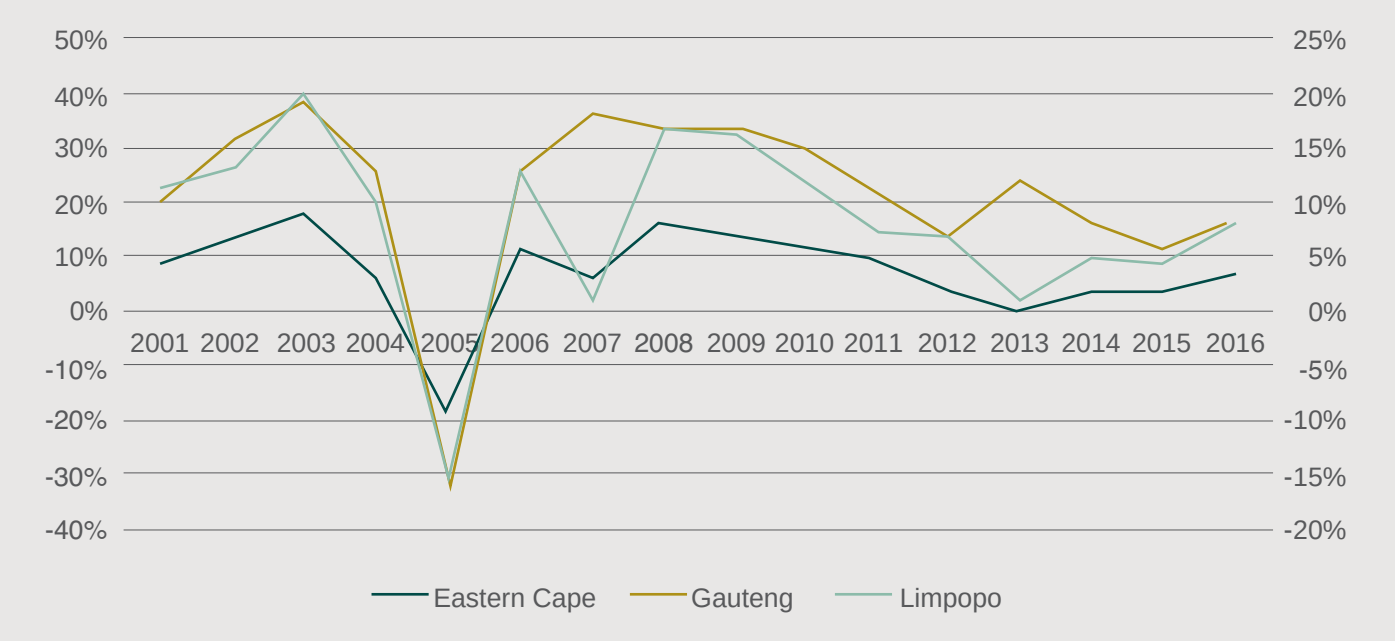
Learner mobility within rural provinces display a mixed picture (Table 24). For instance, out of Limpopo's 10 education districts, Grade 1 learner enrolment has only increased in three districts, with two districts having experienced declines while five districts have remained neutral. Enrolment levels are rising within key urban districts such as Polokwane and Tzaneen. The Vhembe district in Limpopo stands out as the most stable and highest performing, suggesting a close relationship between learner mobility and education results. Similarly, only six districts in the Eastern Cape show growth in Grade 1 enrolment relative to 14 which are consistently declining and three that have remained relatively neutral. Learner mobility patterns are, however, more nuanced — while places such as Port Elizabeth and East London are increasingly accounting for a bigger share of pupil distribution, small rural towns and districts such as Grahamstown and Cradock are also growing. Some districts are showing an inconsistent enrolment pattern, which the Department of Education attributes to changing school performance and the learners voting with their feet.

6.4.3 Fiscal effects and responsiveness of transfers to learner migration

The education function of provinces is funded through the PES, which is allocated to provinces using a formula that comprises six components. The education component currently accounts for 48% of the total PES and is allocated to provinces based on their proportional share of school enrolment and school-age population (5–19). This formulation ordinarily allocates more funding to provinces with a bigger population. As the number of learners changes across provinces, the PES formula is revised to redirect resources where the needs are greatest.

The PES has responded fairly reasonably to the changing scholar migration patterns by compensating provinces that receive more learners and adjusting downwards the allocations of the sending provinces, although this adjustment is gradually phased in. This approach is still considered unfair by the sending provinces who argue that it fails to account for the continuous spending needs of areas or schools in which learners decline. On the whole, the per capita PES education allocation of the sending provinces, even after accounting for migration, is similar and grows on par with the rest of the provinces. Annual inflationary adjustments made to PES allocations cushion the sending provinces against declining learner enrolment. Figure 32 shows the growth trend in the PES education allocation for the three provinces under assessment.

Figure 32. PES education allocation growth rate



6.4.4 Effects on provincial budgets

Notwithstanding the claim by the sending provinces regarding the negative effect of out-migration on their education budgets, Table 25 suggests that the annual adjustment (both inflation and enrolment) made to the PES leaves sufficient room for provinces to afford the required minimum allocation for the poorest learner (those in quintile 1 to 3 schools). The no-fee threshold or set per-learner target allocation for 2017 is R1 242. According to the computation in Table 25, all provinces should be able to meet this target if they allocate at least 10% of their total education budget for NPNC expenditure.

Table 25. Computed PES per capita education allocation based on 10% NPNC budget

Province	2015	2016
Eastern Cape	1 254	1 341
Free State	1 437	1 519
Gauteng	1 470	1 594
KwaZulu-Natal	1 287	1 376
Limpopo	1 165	1 251
Mpumalanga	1 296	1 397
Northern Cape	1 577	1 690
North West	1 447	1 553
Western Cape	1 572	1 688

Source: Commission's calculations.

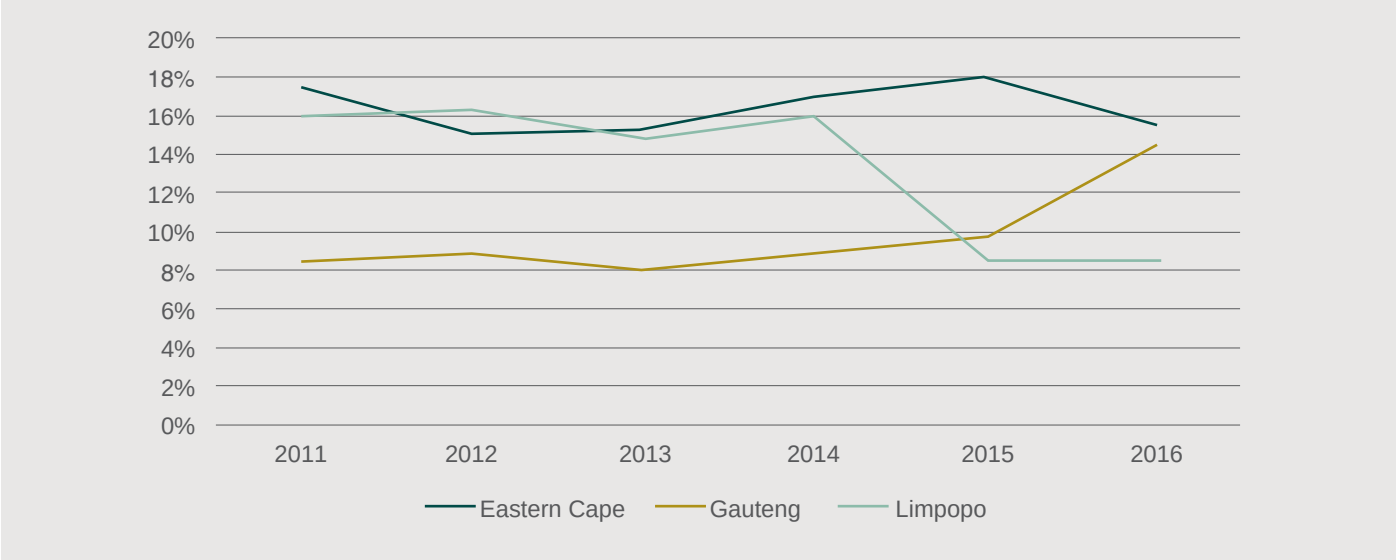
6.4.5 Effects on school allocations

The budgetary effects of learner mobility are highly evident at the school level rather than at the district and provincial level. Changing learner distribution patterns can result in a school becoming financially, operationally and academically unviable because of low enrolments. National guidelines for determining an unviable school suggest a threshold of 200 learners but some provinces such as Limpopo use a lower threshold of 100 or less. Schools with less than 100 learners invariably receive small budget allocations that are sometimes insufficient to cover the full cost of delivering the academic programme. For instance, a no-fee school with 50 learners is only eligible for a R62 100 budget allocation to spend on learner support material, maintenance and other operational costs. Using a threshold of 200 we find that 2 242 schools in Eastern Cape, 950 schools in Limpopo and 342 schools in Gauteng have become unviable, largely as a result of deteriorating enrolment. These schools, including those which are dilapidated and inaccessible, have to be either closed or rationalised.

6.4.6 Effects and responsiveness of education infrastructure conditional grants

As indicated earlier, the changing spatial distribution of learners across districts and provinces may affect infrastructure delivery and the funding thereof owing to the resulting over- or under- utilisation. Figure 33 projects the growth trajectory of the education infrastructure grant allocation, as a key funding instrument across the three provinces under examination. The picture that emerges suggests that the infrastructure funding regime is changing from one that prioritised eradication of infrastructure backlogs in Eastern Cape and Limpopo to one that responds to growing urban learner populations. Gauteng has experienced the highest allocation growth rate of 25% over the five years since 2011, compared to just under 9% and 1% in Limpopo and Eastern Cape respectively. Interestingly, these provinces continue to build new, or replace old schools in areas with declining learner enrolments.

Figure 33. Education infrastructure grant allocation growth trajectory



Source: Commission calculations based on National Treasury database.

6.4.7 Planning and budgeting processes for managing learner mobility – case studies

The process of managing learner mobility varies from one province to another given the varying provincial dynamics. In Gauteng for instance, intra-provincial learner mobility is regarded as less of a concern than net migration emanating from other provinces. As a result, the province emphasises the need for learners to apply for enrolment early so that placement and planning for the allocation of school resources is completed prior to the start of the school year.

Gauteng is constantly confronted with the challenge of building new schools and chasing demand. In his budget speech for 2016, the member of the executive committee for education in the province indicated that 16 new schools will be constructed to accommodate 16 000 learners on the waiting list. For the province, the implications of learner mobility extend far beyond the education sector. Municipal authorities also need to make land provision for building new schools in their spatial development plans. As argued in chapter 5 of this Submission, due to poor coordination, high-density property developments take place without adequate provision for schools.

Eastern Cape and Limpopo are both faced with totally different challenges to those of Gauteng. To manage learner mobility these provinces rely on four strategies — closing schools, consolidating small schools, building hostel schools and offering multi-grade teaching. The process of closing or merging schools is, however, not easy as it requires compliance with guidelines, consultation with affected communities and making difficult budget choices. Trade-offs are made between conflicting options which include whether to close an existing unviable school, replace its dilapidated infrastructure and provide prefabricated classrooms or offer an expensive learner transport option to another school. Generally multi-grade teaching is associated with poor quality education and school closures are marred by political controversy and community resistance. Recent media reports (Shaba and Jobber, 2015) outlined controversial plans by the Minister of Education to close 1 000 schools in the Eastern Cape and a proposal to close 18 schools by the Western Cape government. Despite resistance, the total number of schools has declined dramatically from over 30 000 in 2007 to less than 25 000 in 2016 due to the closure and rationalisation of schools (Department of Basic Education, 2015).

6.5 Summary and Recommendations

Learner mobility is an inevitable part of urbanisation. With the rising rate of urbanisation more learners can be expected to switch from rural schools to those located in urban centres. Education policy planners in both the sending and receiving areas should be better equipped to deal with the implications of learner mobility from an infrastructure delivery, planning and funding perspective. The analysis in this chapter reveals that learners are indeed migrating towards urban centres. This evident pattern of learner mobility appears in the context of inter-regional movements where learners migrate from traditionally rural provinces, such as Limpopo and Eastern Cape, to Gauteng. The level of intra-regional learner mobility is less pervasive but clearly indicates a rural-urban migration pattern, particularly in the Eastern Cape.

Findings indicate that inter- and intra-regional learner mobility affects the funding allocations and the overall budget of provinces. Through the principle of 'funds follow the learners' applied in the allocation formulae, Gauteng, which receives the bulk of new learners into the schooling system per annum, is compensated for accommodating additional learners. However, the compensation is deemed insufficient in that the adjustments made through the PES and the infrastructure conditional grants do not cover the full cost of curriculum provision. Similarly, the sending provinces contend that the resulting downward adjustment of their allocations disregards their residual responsibilities in respect of catering for the remaining schools – even if such schools have become unviable. It however appears that the provincial equitable share has been able to protect allocations of both the receiving and sending provinces through hefty annual additions to the baseline allocations. Managing learner mobility requires provinces not only to focus on the adequacy of the funding instruments but also to invest in long-term planning to provide for spatial demographic patterns and development plans.

With respect to addressing problems for education sector planning and funding due to urbanisation-induced learner mobility, the Commission recommends that:

1. The National Treasury should incorporate weighted learner socio-economic profiles into the education component of the provincial equitable share formula as an additional indicator of education needs.
2. Both the National Treasury and Department of Basic Education must ensure that the framework for the Education Infrastructure Grant incorporates the need for provincial infrastructure plans to take into account spatial demographic patterns and forecasts, particularly when decisions to build, expand or maintain schools are made.
3. The Department of Basic Education must allocate learners with unique identification numbers when they first enter the school system to (1) ensure that learners are allocated the requisite funding that is consistent with their socio-economic profile when they move between schools and (2) enable seamless tracking and measurement of learner movements across provinces and within districts.

FINANCIAL AND FISCAL COMMISSION

For an Equitable Sharing *of National Revenue*

Chapter 7

Industrial Diversity and Economic Performance in Urban Municipalities

Chapter 7: Industrial Diversity and Economic Performance in Urban Municipalities

7.1 Introduction

Sections 152(1) and 153(a) of the Constitution require that beyond acting as administrative units tasked with the provision of public services, authorities within South Africa's local government sphere must fulfill a developmental mandate. In addition to prioritising the provision of essential basic services, this developmental mandate requires that municipalities promote socio-economic development and in cooperation with the national and provincial spheres of government implement policies to improve the quality of the economic and material needs of the communities located within their jurisdictions. The enactment of the Local Government: Municipal Systems Act of 2000 provided the foundation for the local economic development (LED) functions of municipalities to be incorporated into strategic plans detailing the systems and processes through which municipalities will conduct their economic planning and development functions. Through the integrated development plan (IDP), municipalities are expected to develop a broad set of development priorities, following extensive consultative processes with local communities, the non-governmental sector as well as the private sector (Koma, 2014).

Since the formal establishment of municipal administrative structures in 2000, prevailing macroeconomic policies and national government's response to development challenges have had both direct and indirect impacts on LED policy frameworks across the local government sphere. Between 1994 and 2010 the thrust of government's macroeconomic policies[23] focused attention on efforts to reduce poverty, inequality and unemployment through initiatives aimed at raising levels of economic growth, enhancing productivity, addressing infrastructure deficits and bottlenecks, improving the levels of both public and private sector investment, and the sustainability of government's spending on pro-poor programmes. During this period and through the various iterations of macroeconomic policy objectives, the LED framework of the local government sphere emphasized public investment spending that was largely focused on upgrading municipal economic infrastructure. This emphasis was premised on the view that such spending would enhance the economic capacity of areas within municipalities to attract and stimulate investment in sectors with local comparative advantages. In turn, such investments would create better conditions for economic growth and employment generation (National Treasury, 2011).

In line with the objective of aligning the LED strategies of municipalities with public investments targeted at funding economic initiatives driven by geographical location and comparative advantages of municipalities, intergovernmental support encompassed grants designed to channel greater levels of spending towards programmes promoting participation in LED initiatives. Grants with an LED bias included the Neighborhood Development Partnership Grant and the Expanded Public Works Programme (EPWP).[24] Outside of the intergovernmental fiscal framework, support for LED programmes involves a range of public entities, state-owned enterprises and private sector bodies. Institutions such as the Industrial Development Corporation, Development Bank of Southern Africa (DBSA) and provincial economic development agencies have undertaken programmes offering technical and financial support for implementation of LED projects while micro-finance assistance support offered by large corporates (such as the Old Mutual Group) have focused on promoting skills development and diversification of economic activities particularly within rural municipalities.

Despite the various support mechanisms to assist municipalities implement their LED plans, capacity and financial constraints remain significant drawbacks. The lack of qualified technical personnel has meant that vital LED processes are poorly incorporated into the policy frameworks of the majority of local governments. As a result, LED plans are mainly characterised by an emphasis on compliance rather than on designing and implementing strategies to exploit potential economic opportunities to foster local growth and development (Koma, 2014, Lawrence and Hadingham, 2008).

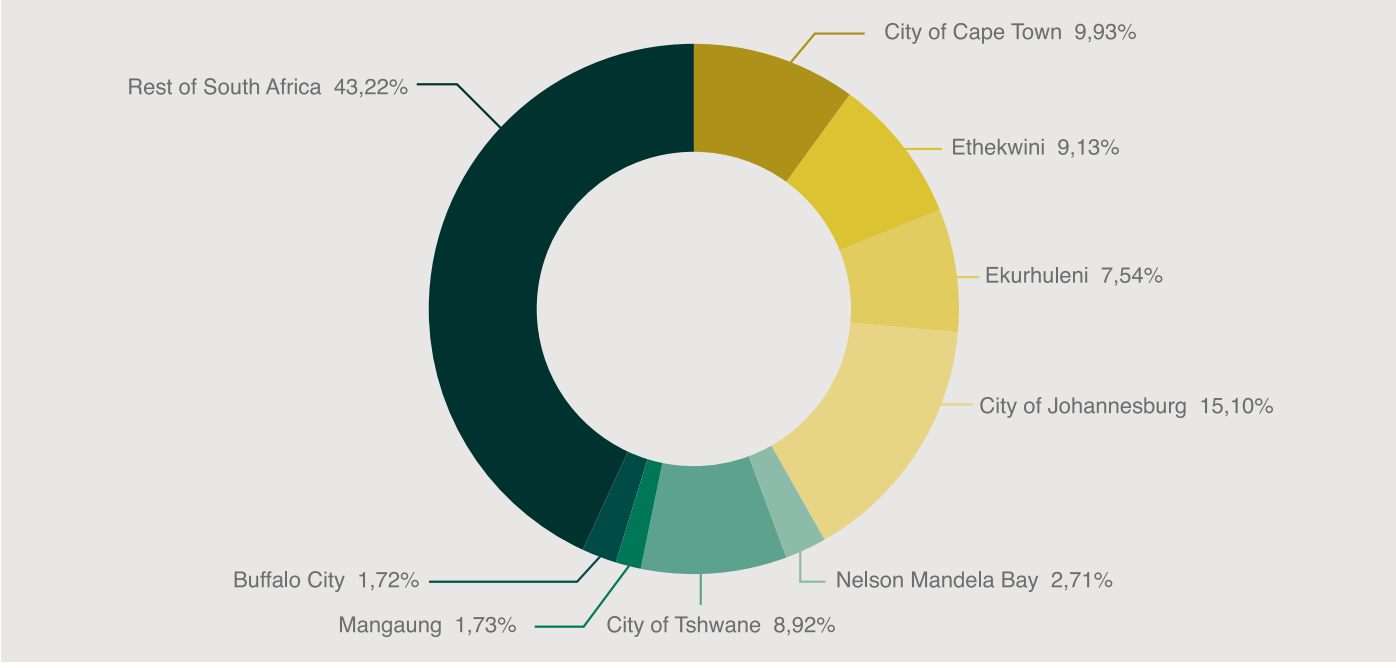
23 These included the Reconstruction and Development Programme (RDP); the Growth, Employment and Redistribution Strategy (GEAR), and the Accelerated and Shared Growth Initiative for South Africa (AsgiSA).

24 In line with their Integrated Development Plans, municipalities, especially those classified as rural, are allowed to spend a portion of their municipal infrastructure grant to support LED-related investments in economic infrastructure.

Municipalities' preoccupation with the core competencies listed in schedules 4 and 5 of the Constitution has had a significant bearing on the allocation of funds to LED initiatives. Available statistics indicate that as a whole, local government authorities allocate less than 2% of their operating budgets to LED initiatives, an outcome that severely handicaps the ability of municipalities to independently drive regeneration initiatives that will further attract investment and capitalise on economic potential within their jurisdictions (Sienkiewicz, 2014; National Treasury, 2011).

The critical need for the realisation of LED initiatives is especially pronounced in municipalities that encompass the major metropolitan areas, urban centres and secondary cities. In the post-1994 dispensation, South Africa's cities and urban centres remain areas characterised by the concentration of economic activities, with the local economies of such regions consistently driving growth and outperforming those of the country's rural areas and towns (see Figure 32). In the post-1994 era, urban economies have grown nearly twice as fast as the rest of the country, and created twice as many new jobs. Despite this, a number of challenges remain in exploiting the full economic potential of South Africa's urban areas. First, urban areas retain high levels of unemployment and income inequality. While the average income of urban residents is four times more than their rural counterparts, the scale of urban poverty is significant due to the inability of urban economies to provide sufficient employment opportunities, especially for unskilled or semi-skilled workers (Centre for Development and Enterprise, 2016). Second, the focus during the first decade of South Africa's democratic transition on addressing macroeconomic challenges and establishing sustainable institutional and governance frameworks meant little attention was devoted towards leveraging the economic potential of cities in addressing issues of economic growth, inequality and unemployment. As a result, South Africa's cities were largely underrepresented in national policy development and budget processes, while vital infrastructure spending programmes by state-owned enterprises did not fully incorporate diverse regional and local circumstances in ways that could enhance the growth and economic trajectories of the country's cities (Turok, 2010).

Figure 34. Share of regions in total GVA, 2015



Source: Quantec Regional Database, 2016.

In recent years, the recognition of cities as engines of economic growth and their potential role in reducing poverty, inequality and unemployment has generated a renewed focus on designing and implementing policies aimed at overcoming constraints to maximising the potential of urban economies. The National Development Plan (NPC, 2011) which outlines South Africa's strategic priorities and objectives over the next two decades envisages that municipalities, particularly those covering urban regions, will play a key role in ensuring that the impact of measures aimed at generating inclusive economic growth to reduce high levels of poverty and unemployment are felt in localities as well as nationally (Reddy, 2016). In this regard, the LED strategies of urban municipalities are expected to focus on promoting diversification of economic activities, facilitating spatial economic transformation and stimulating investments that will create vibrant and sustainable township enterprises that can play a key role in building an inclusive, labour-absorbing and growing economy.[25]

25 The promotion of inclusive rural economies is also a key part of local government sphere's contribution to the NDP vision.

Various strategies have formed the foundation of increased support for urban municipalities to harness revenues for the financing of local initiatives deemed strategic to the creation of local economies capable of promoting inclusive growth. In 2012, National Treasury initiated the CSP to address spatial inequalities and development challenges at the city level. In collaboration with key government departments, the project aims to harness human, financial and institutional capacity to improve planning, implementation and innovation in order to ensure that cities are more inclusive, liveable, productive and environmentally, financially and economically efficient, while also being resilient. Through the seventh iteration of the Department of Trade and Industry's (DTI) Industrial Policy Action Plan (IPAP), government seeks to create positive linkages between national economic policies and the LED initiatives of urban municipalities. Such linkages aim to maximise the opportunities provided by productive value chains and multipliers that exist between key economic sectors (such as mining and manufacturing). By providing strategic policy leadership and direction and utilising public spending to promote small business development, re-industrialisation and diversification of city-regions, urban municipalities are expected to assist in the attainment of IPAP's stated objective of promoting the increased diversity of South Africa's industrial sector, and for such diversity to enhance employment opportunities in a context of rapid urbanisation.[26]

While a range of theoretical arguments suggest a fundamental link between economic diversity and growth, empirical assessments of the links between industrial structure and economic performance yield a varied set of findings across different regional economies operating within different economic systems. Establishing the exact nature of the diversity-growth nexus is particularly important for South Africa where in the post-apartheid dispensation, the development corridor concept – a concept that seeks to enhance the flows of economic activities across identified areas and regions in order to channel and focus economic growth between networks of cities, is integral to government's spatial development strategy for urban centres or cities.

Within the development corridor strategy, programmes such as the CSP and IPAP are implemented based on the assumption that the economic development of urban economies will be enhanced via state intervention aimed at addressing the apartheid spatial economic structures. However, events such as the global recession of 2008 and the subsequent loss of markets and employers within the vulnerable sectors of mining and manufacturing, are a reminder of the need for proposed interventions to be sensitive to (i) how geographical matters and the structure of economic activities within urban areas can influence regional economic growth and development, and (ii) unpredictable economic events such as business cycles and exogenous shocks in export markets can cause a major shift in the fortunes of local industries. In this regard, a key challenge facing policy makers within South Africa's urban areas is how to generate and allocate resources towards financing not only their service delivery mandate, but also, stimulating local economic growth and employment.

Government is increasingly cognisant that accelerated urbanisation could help drive rapid economic growth and reduce the burdens of poverty and inequality. However, for this to become reality, it is important to have a full understanding of the nature of the dynamic interactions between economic activities across major urban centres and outlying areas, and the extent to which the diversity or concentration of industrial activity enhances regional the economic performance. In turn, such insights can assist in the design of IGFR instruments geared towards expanding the scope for economic activities in terms of the industrial structure within urban areas that provides opportunities for enhancing employment and local economic performance. Against this background, this chapter seeks to provide empirical evidence on how the structure of economic activity (including industries location and employment) affects economic performance of South Africa's urban municipalities including metropolitan areas and secondary cities touted as 'engines of growth'. The findings of the analysis will inform recommendations that in turn seek to inform policies around how existing intergovernmental fiscal relations instruments, taking into account current economic dynamics, can be appropriately shaped to ensure that one of the stated goals of the NDP – creating cities that are economically inclusive, resilient and sustainable – is achieved.

26 While rural municipalities are not explicitly targeted within the IPAP, DTI funded or LED initiatives such as the Incubation Support Programme and Co-operative Incentive Scheme constitute programmes with a bias towards enhancing competitiveness and economic opportunities for small, micro and medium enterprises operating within smaller as well as rural municipalities.

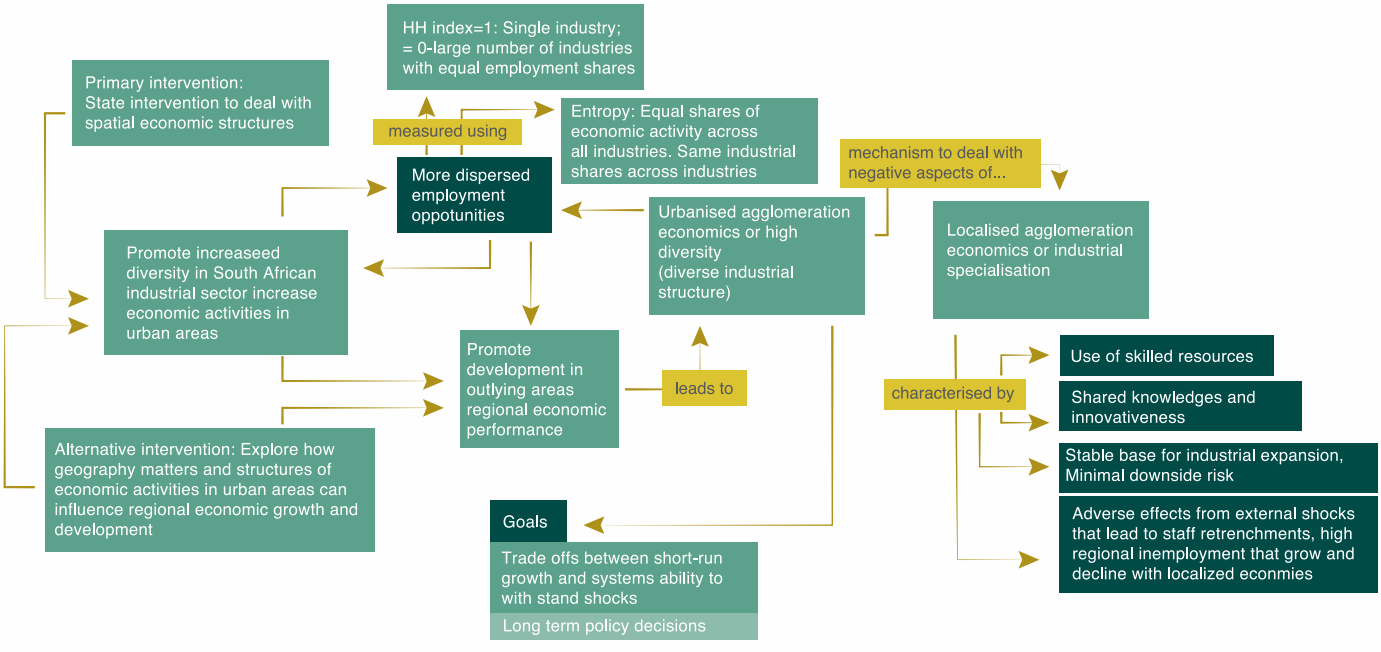
7.2 Research Methods

External economies that enable business firms to profit from their proximity to other businesses – 'agglomeration economies' – can result from two phenomena, namely (i) industrial specialisation or localised agglomeration economies, and (ii) high diversity or urbanised agglomeration economies. For over two centuries, traditional economic theory has advanced the argument that greater specialisation allows people to use their skills and resources to their best advantage. By extension, the notion of comparative advantage allows specialised firms to enjoy economies of scale, greater access to shared knowledge, maintain innovativeness in the face of local competition and benefit from shared output markets (Porter, 1990). In this regard, Drennan (2002) finds that most metropolitan areas are specialised, and the implication is that healthy urban economies specialise in order to gain benefits from growth experienced by firms when they are close to firms that are technologically similar or somehow related to them (Storper and Manville, 2006).

Policy makers can thus choose to either implement strategies that focus on enhancing the comparative advantages of cities and facing the possibility of high volatility in the local economy or set policies aimed at diversifying the economy which offer stability but may reduce the prospect for higher economic growth. If the latter approach is chosen, it represents the view that diversification of economic activities is a straightforward approach to addressing the negative aspects of specialisation. As a region becomes more diversified, it becomes less sensitive to the fluctuations caused by external factors (Nourse, 1968, Richardson, 1969).

The conceptual framework underpinning this chapter is multi-dimensional and provides the links through which a diversity of economic activities can prove beneficial for economic performance of a region or area. Diversity in economic or sectoral activities ensures that a region is best placed to better absorb structural changes stemming from episodes of economic decline or adverse shifts associated with shocks to trade patterns. Unlike regions with specialised industries where retrenched employees may be unable to find alternative jobs, a diverse industrial structure creates more dispersed employment opportunities and allows for development in outlying regions (see Figure 35). The framework in Figure 35 highlights the role that diversified economic bases or activities within regions can be used to deal with adverse effects of local agglomeration economies while ensuring a balance between short-run and long-term dynamics of economic stability and growth.

Figure 35. Hypothesised mechanism for exploring industrial diversity and economic performance in urban economies



Source: Commission's compilation.

From Figure 35, we note that competing policies and expected outcomes drive different approaches in ensuring that industry structure influences regional growth across urban municipalities. Government can adopt an interventionist approach in which

it actively pursues a spatial transformation agenda aimed at diversifying both location and concentration of economic activities across urban regions. Alternatively, a policy centered on geographical dispersion of activities and enhancing value chains to achieve diversity could be used to promote development in outlying areas while creating dispersion in labour-absorbing economic activities. By ensuring that urban areas either have diversified economic bases in which businesses can benefit from proximity to external economies or positive spillovers generated by linked industries, government can address some of the negative aspects of industrial specialisation when highly concentrated or specialised regions are affected by adverse economic conditions.[27]

While many factors may affect growth and development, this study evaluates the impact of the structure of production activities on the economic growth of South Africa's urban municipalities classified as metropolitan (Category A), secondary cities (Category B1) or large towns (Category B2). To account for the link between industrial diversity and growth, this study draws from similar empirical studies (see for example Izraeli and Murphy, 2003, Mizuno et. al., 2006 and Fu et.al, 2010) and proposes the following empirical model:

$$MPIC_{it} = (DIV_{it}, Y_t, PDEN_{it}, NWT_{it}, YOUTH_{it}, AGED_{it}, POP_{it}, EDUC_{it}, GROWTH_{it}) \quad (1)$$

From equation (Eq.)(1) *MPIC* is growth in municipal capita income; *DIV* measure the degree of industrial deversity: *Y* is the growth rate of national per capita income; *PDEN* population density; NWT is the labour force that is non-white; YOUTH is the share of persons aged 4-15: AGED is the share of population 65 years and older; POP is total municipal population: EDUC is the percentage of of higher education graduates within the labour force and GROWTH is the rate of population growth. The subscripts i and t denote municipality and time period, respectively.

We note the following about Eq.(1). DIV is measured via the calculation of an index that represents an entropy measure of diversification and is expressed as:

$$DIV_{it} = -\sum_{j=1}^{N}\left(\frac{e_{ij}}{e_i}\right)\ln\left(\frac{e_{ij}}{e_i}\right) \quad (2)$$

where Eq.(2) is also known as the Shannon index in which e_{ij} is employment in municipality i and industry j, e_i is total employment in municipality i and $\ln$ denotes natural logarithm. Smaller values of the diversity measure (DIV) are associated with a more specialised industrial structure, and larger values suggest that a region has greater levels of diversity in economic activities or sectors. To analyse the sensitivity to the diversification measure in Eq.(1), we utilise the Herfindahl index as an alternative measure of industrial concentration (or diversity). As an entropy measure that reflects the distribution of employment share among firms, the Herfindahl index indicates the ratio of labour demand by each industry, thus providing information about industry composition within a municipality (Brown and Greenbaum, 2016). The Herfindahl index for a municipality i is calculated as:

$$H_i = \sum_{j=1}^{N} e_{ij}^2 \quad (3)$$

where e_{ij} is the market share of employment coming from industry j located in the i^{th} municipality and N is the total number of industries. Where the value of Eq.(3) for a municipality exceeds one, such a municipality can be considered to be more specialised industry j.

Turning our attention to the variables in Eq.(1), we expect a negative correlation between the degree of industrial diversity and municipal per capita income. This expectation stems from the hypothesis that industrially diverse states trade off employment security for lower per capita income (Izraeli and Murphy, 2003). Positive trends in national per capita income are expected to be directly related to real per capita incomes at the municipal level. Both PDEN and POP are measures of municipal

27 The 'ghost-town' phenomenon that followed the closure or downscaling of mining activities in parts of the Free State, Northern Cape and Limpopo is particularly instructive.

size which is expected to have a positive relationship with municipal per capita income. Regions with high populations and population densities drive relatively higher demand for economic goods (and services) such as land. In addition, citizens within high density regions tend to pay higher fees to deal with negative externalities of pollution, crime and congestion. Thus, addressing such costs would require higher incomes and therefore, we expect a positive correlation between the measures of municipal size and per capita income.

We include the share of municipal populations – NWT, classified as Africans, Coloureds and Indians to capture the legacy effects of discriminatory legislation that impacted the urbanisation process within these groupings. A higher share of YOUTH and AGED indicates higher dependency given the non-participation of many within these groups in the labour force. As such we expect a negative relationship between these two age-groups and municipal per capita income. The condition of the national economy has a bearing on the economic prospects and performance of sub-national spheres. In this study, growth rate of national per capita income (Y) is used as a proxy for the condition of the national economy. Theoretical and empirical studies on determinants of economic growth have highlighted the importance of human capital in a country's growth process. To capture this influence, Eq.(1) includes the level of education (EDU) calculated as the share of a municipality's population that has attained either a matric, bachelor's or graduate degree. The related descriptive statistics and sources of data are summarised in Table 26.

Table 26. Summary of data and sources

Variables	Mean	Minimum	Maximum	Data Sources
$MPIC_{it}$	0.01 (0.039)	-0.153	0.165	Global Insight
DIV_{it}				
Shannon index	1.959 (0.122)	1.088	2.206	Commission own calculations using Global Insight Data
Herfindahl index	0.168 (0.039)	0.117	0.550	
Y_t	0.013 (0.016)	-0.027	0.040	National Treasury and Global Insight
$PDEN_{it}$	264.6 (442.63)	3.06	2926.32	Global insight
NWT_{it}	0.861 (0.081)	0.461	0.997	Global Insight and Statistics South Africa
$YOUTH_{it}$	0.280 (0.037)	0.207	0.437	Global Insight and Statistics South Africa
$AGED_{it}$	0.051 (0.017)	0.014	0.135	Global Insight and Statistics South Africa
POP_{it}	541272 (876951)	40907	4822787	Global Insight and Statistics South Africa
$GROWTH_{it}$	0.017 (0.015)	-0.03	0.12	Global Insight
$EDUC_{it}$				
Matric	0.156 (0.114)	0.001	0.371	Global Insight
Certificate	0.036 (0.034)	0.0002	0.113	
Bachelors	0.018 (0.02)	0.00	0.578	
Graduate	0.009 (0.010)	0.000	0.2737	

Note: Except for population which is 1, 000 and population density which is the number of people per km2, respectively, all other variables are specified by a percentage. Numbers in parentheses are standard deviations.

Source: Commission's compilation.

7.3 Findings and Discussion

In this chapter, the empirical analysis of the link between industrial diversity and economic growth involves the estimation of Eq.(1) using fixed effects to control for region-specific effects such as climate, traditions and geography that are unobserved and might determine a region's economic growth rate. In general econometric terms, Eq.(1) can be rewritten as:

$$RPIC_{it} = \beta_o + \delta_i + \phi_t + \beta_1' X_{it} + \varepsilon_{it} \quad (4)$$

where β_0 is a costant term, δ_i term captures idiosyncratic factors specific to regions that are unobservable while ϕ_t fixed effects used to control fonobserved, time-varying shocks common to all municipalities. X_{it} is a vector of regressors (i.e. socio-economic and demographic attributes described above) of a municipality and β_1' is the corresponding vector of regression conefficients.

Given the chapter's focus on urban economies, it is important to note the possible existence of spatial dependence in the economic growth patterns of neighbouring regions. It is likely that that economic performance in one region is affected by shocks to economies of neighbouring areas. For example, to the extent that two metropolitan areas such as the cities of Johannesburg and Tshwane are significant trading partners, then a demand shock in one metropolitan area could have repercussions for economic performance in a nearby region (Izraeli and Murphy, 2003). Additionally, unobserved factors that contribute to economic performance may be spatially correlated across regions at each point in time. Thus, the error term in Eq. (4) and/or the dependent variable, economic growth rate, of one urban municipality state may have spatial dependencies with neighbouring regions. This problem is addressed by estimating Eq.(4) using the feasible generalised least squares method. Table 27 reports the baseline model results.

Table 27. Regression results from FGLS estimation

Variable	Model A		Model B	
	Herfindahl Index	Shannon Index	Herfindahl Index	Shannon Index
DIV_{it}	-0.035 (-0.90)	0.004 (0.41)	0.107 (3.47) ***	-0.032 (-3.41) ***
Y_t	1.05 (25.39)***	1.05 (25.43)***	0.702 (26.72)***	0.702 (26.69)***
$PDEN_{it}$	6.24e-06 (1.75)*	6.63e-06 (1.82)*	-7.86e-06 (-1.56)	-7.43e-06 (-1.48)
NWT_{it}	-0.013 (-0.97)	-0.013 (-0.96)	-0.01 (-0.591)	-0.01 (-0.50)
$YOUTH_{it}$	0.078 (1.82)*	0.071 (1.66)*	0.06 (1.54)	0.05 (1.37)
$AGED_{it}$	0.163 (2.04)**	0.162 (2.02)**	-0.02 (-0.29)	-0.04 (-0.63)
POP_{it}	-2.61e-06 (-1.03)	-2.69e-06 (-1.07)	7.61e-10 (0.21)	6.48e-10 (0.18)
$GROWTH_{it}$	-0.563 (-7.76)***	-0.556 (-7.71)***	0.097 (1.59)	0.086 (1.42)
Matric	-0.131 (-3.24)***	-0.126 (-3.15)***	-0.038 (-0.92)	-0.051 (-1.24)
Certificate	0.562 (3.73) ***	0.570 (3.77) ***	0.117 (0.80)	0.164 (1.12)
Bachelors	-0.205 (-0.56)	-0.260 (-0.72)	0.734 (1.75)*	0.781 (1.88)*
Graduate	0.205 (0.47)	0.226 (0.52)	- 1.365 (-2.58)**	- 1.45 (-2.58)**
Metro Dummy	0.007 (0.003)*	0.006 (1.63)*	-0.002 (-0.35)	-0.003 (-0.59)

Note: Parentheses contain t-statistics

Source: Commission's compilation.

The results in Table 27 show that two measures of diversity (Shannon and Herfindahl indices) are included in two versions of Eq.(4). In Model A, the preferred measure of economic performance at both municipal and national spheres are real per capita GVA and real per capita GDP, respectively. A 1% increase in the Herfindahl index – increased concentration or specialisation of economic activities in a municipality, lowers growth in real per capita GVA by 0.04% (or alternatively a 1% decrease in the Herfindahl index raises growth in real per capita GVA by 0.04%). Similarly, the coefficient on the measure of industrial diversity using the Shannon index is positive and indicates that a 1% increase in the Shannon index (i.e. greater diversification) results in 0.004% increase in real per capita GVA.

For Model B, the preferred measure of economic performance at both municipal and national spheres are the growth in nominal, per capita income. The results show a positive relationship between industrial diversity and economic performance of municipalities. Where the Herfindahl index is used, a 1% increase in industry concentration or specialisation will cause growth in municipal per capita income to increase by 0.1%. When diversity is measured using the Shannon index, increased concentration (or greater diversification) will raise (or lower) growth in municipal per capita income.

Across the two models, results indicate that increases in the share of persons not classified as white tend to lower municipal income per capita. Education is also an important determinant. From Model A, municipalities with increased human capital in the form of residents with certificates and graduate degrees will experience higher levels of growth in per capita income. In Model B, a rise in residents with certificates and bachelor degrees will have a positive impact on average municipal per capita income. Across all estimations, the results show that increases in municipal populations having matric tends to lower growth in municipal per capita income.

The context of municipal size matters for economic performance. From Model A, increased population density has a positive and statistically significant impact on growth in real GVA per capita. However, where average municipal income is used as the measure of performance, a negative relationship holds between growth in income and population density. Finally, with the exception of Model B, increased dependency measured by the share of youth and elderly in the population has a positive effect on the growth in municipal per capita income. While this particular finding contradicts theoretical expectations, it is not an anomaly when examined within the context of South Africa's social welfare system. More specifically, this finding is in line with previous Commission analysis which has shown that South Africa's implementation of a comprehensive social welfare system to assist indigent children and elderly persons has positive impacts on levels of poverty and inequality.

7.4 Summary and Recommendation

The main results emerging from the analysis can be summarised as follows:

1. Industrial diversification matters for economic performance based on regional output (GVA). On the other hand, greater specialisation can raise growth in average disposable incomes.
2. Existence of social support programmes benefiting the youth and the elderly helps ensure that urban municipalities with higher dependent populations do not experience slower growth in incomes.
3. Human capital accumulation matters for urban economic performance. In the case of growth in per capita value added output, urban municipalities able to experience an increase in the share of their population with post-matric education are likely to experience growth in value added per municipal resident. On the other hand, increased human capital in the form of persons with bachelor's degrees positively impacts on growth in average municipal incomes. Across different measures of municipal economic performance, growth in the share of the population with matric has a negative effect on the economic performance of municipalities.
4. Municipal type/status matters for economic performance and the classification of a municipality as a metropolitan area has a positive and statistically significant effect on growth in municipal value added per resident.
5. Funding of economic diversification strategies is carried out as part of LED initiatives. However, LED is not fully embedded in municipal structures as evidenced by the funding and capacity constraints in designing and implementing LED across municipalities. Growing recognition of urban municipalities as engines of economic growth has prompted intergovernmental initiatives aimed at ensuring that beyond providing local services and developing infrastructure, urban (and rural) municipalities incorporate LED as a core competency that is able to deliver significant impact on the local economy and employment.

With the objective of improving industrial diversity and economic growth in urban municipalities, the Commission recommends that:

1. Through National Treasury, government establishes an economic diversification plan as part of its objective to support cities in promoting spatial transformation and economic growth. This fund can either be ring-fenced within existing grants linked to growth and spatial transformation of cities (such as the Integrated Cities Development Grant), or specified as a minimum spending requirement to ensure that recipient municipalities spend allocated funds towards programmes that broaden and deepen spatial transformation and economic growth through diversification of economic activities within their jurisdictions.

FINAN
AND F
COMM

For an Equit
of Nationa

NCIAL
ISCAL
ISSION

able Sharing
al Revenue

FINANCIAL AND FISCAL COMMISSION

For an Equitable Sharing *of National Revenue*

Chapter 8

The Effects of Municipal Spending on Urban Employment

Chapter 8: The Effects of Municipal Spending on Urban Employment

8.1 Introduction

South Africa has one of the highest unemployment rates in the world which has remained above 20% since the dawn of democracy in 1994 (International Labour Organisation, 2015). Despite the widespread perception that unemployment levels are generally lower in urban centres compared with the rest of the country, the reality is that urban municipalities (which using the definition developed in chapter 1 includes metropolitan areas, secondary cities and large towns) also face high unemployment levels that are almost as high as the national average. The key labour market goal of the NDP is to reduce the unemployment rate to 6% by 2030. With inadequate responses to long-standing issues relating to the mismatched supply of and demand for skills, the overall poor quality of work seekers produced by the education system and a small informal sector, the achievement of the 6% target will be a challenge.

On its own, the labour market is unable to correct for the mismatch in supply and demand for labour and government therefore has a crucial role to play in addressing the unemployment problem. Various policies outline the country's multifaceted job creation strategy, namely: the New Growth Path (NGP), the National Infrastructure Plan, the Industrial Policy Action Plan (IPAP) and the successive annual iterations of the IPAP. The NGP has a spherical dimension to it while the IPAP identifies key labour-intensive sectors. However, these policies do not adequately appreciate the unemployment problem in urban areas nor do they explicitly state the role that urban municipalities can play in addressing the challenge.

Urban municipalities with their relatively higher labour absorption rates may offer an avenue through which the unemployment challenge could be alleviated. When municipalities execute their core mandate of basic service delivery, various indirect effects arise and one of these is in the area of job creation. While the responsibility for job creation is primarily the role of national government, local government plays a critical role in promoting job creation, by ensuring that "the overall economic and social conditions of the locality are conducive to the creation of employment opportunities" (White Paper on Local Government, 1998).

As a result, this chapter assesses the indirect effects of municipal spending as it relates to job creation. The study is not premised on the belief that municipalities need to undertake the role of employer in order to alleviate the unemployment challenge, but rather that their activities indirectly impact upon job creation. Thus, the specific objective is to examine the indirect effects of municipal spending programmes on job creation.

The study is significant for a number of reasons. Rapid urbanisation has resulted in a large influx of unemployed people into cities in search of work. The study sheds light on the labour absorptive role that cities can play in facilitating creation of new industries and businesses and thereby integrating unemployed migrants into the urban labour market. While chapters 4, 5, 6 and 7 of this Submission have looked at various determinants of economic growth in urban areas, this chapter and the next one begin to examine how to address the often-cited statement that the unbridled pursuit of growth and competitiveness may create joblessness, inequalities and high levels of poverty. Urban municipalities are also facing increased fiscal constraints. Through an appreciation of the indirect effects of city spending on various economic activities, cities are best placed to effect structural changes that can enhance local economic activities, thereby expanding their tax bases and increasing tax revenues.

8.2 Research Methods

The study focuses on 53 urban municipalities: all eight category A metropolitan municipalities, all 19 category B1, secondary cities and all 26 category B2 municipalities (large towns). Multiple techniques are employed, namely:

Descriptive statistics are used to provide an overview and greater detail of the urban labour market; and

- A fixed effect model is used to identify the impact of municipal spending on total employment. The model framework used follows a similar approach taken by Wallenberg and Partridge (1995) who investigated the fiscal impacts on metropolitan area employment. In this study, the estimation equation is as follows:

- Where, β is the coefficient for the independent variable, which expresses the direction and the strength of the relationship between employment and the independent variables used in the model, t = 2013, 2014 and 2015 (which corresponds with the third phase of the EPWP), i=1,..3, represents the different types of urban municipalities and ε is the error term.

Table 28 details the variables that have been selected for this study as well as the data source. The dependent variable is the change in the natural log of total urban employment. The choice of the independent variables is informed mainly by the literature and expert judgment.

Table 28. Summary explanatory variables and data sources

Variable	Description	Anticipated sign (negative/positive)	Proxy	Data Source
	Dependent Variable:			
Ln (Urban employment)	Total urban employment		Actual data	Global Insight, (2013/14-2015/16)
	Independent Variables:			
Ln Gross Value Added by region and by sector (GVA-R)	Measure of the value of goods and services produced in an area	Negative/positive	Actual data	Global Insight
Rate of urbanisation	Increase in the proportion of urban population over time	Negative/positive	Actual data	Global Insight
Absorption rate	Measured by: (= the employment/ working-age population ratio)	Positive	Actual data	Global Insight/QLFS
Variable of Interest: Fiscal levers	Spending on job creation and poverty alleviation initiatives: Expanded Public Works Programme (EPWP) and Community Work Programme (CWP)	Negative/positive	Actual data	National Treasury
	Infrastructure spending as given by total capital spending as a percentage of total expenditure	Negative/positive		
Quality of infrastructure	Infrastructure index; number of municipalities with infrastructure to provide basic services; households with access to basic services (water, electricity, sewerage); number of domestic and non-domestic consumer units receiving selected services (water, electricity)	Positive	Proxy	Stats SA, non-financial census; Global Insight
Post matric graduates	The percent of the adult population that have post matric qualifications	Positive	Actual data	Stats SA
Total dependency ratio	The number of dependents, aged zero to 14 and over the age of 65, to the total population, aged 15 to 64.	Negative	Actual data	Stats SA
	Dummy Variables:			
Year dummies	Time dummies		Actual data	
Urban municipalities	Sample of 53 urban municipalities comprising all eight metros (Category A), all 19 secondary cities (Category B1) and 26 large towns (Category B2). The period under review is the 2013/14 – 2015/16 financial period.		Actual data	Stats SA

Source: Commission's compilation.

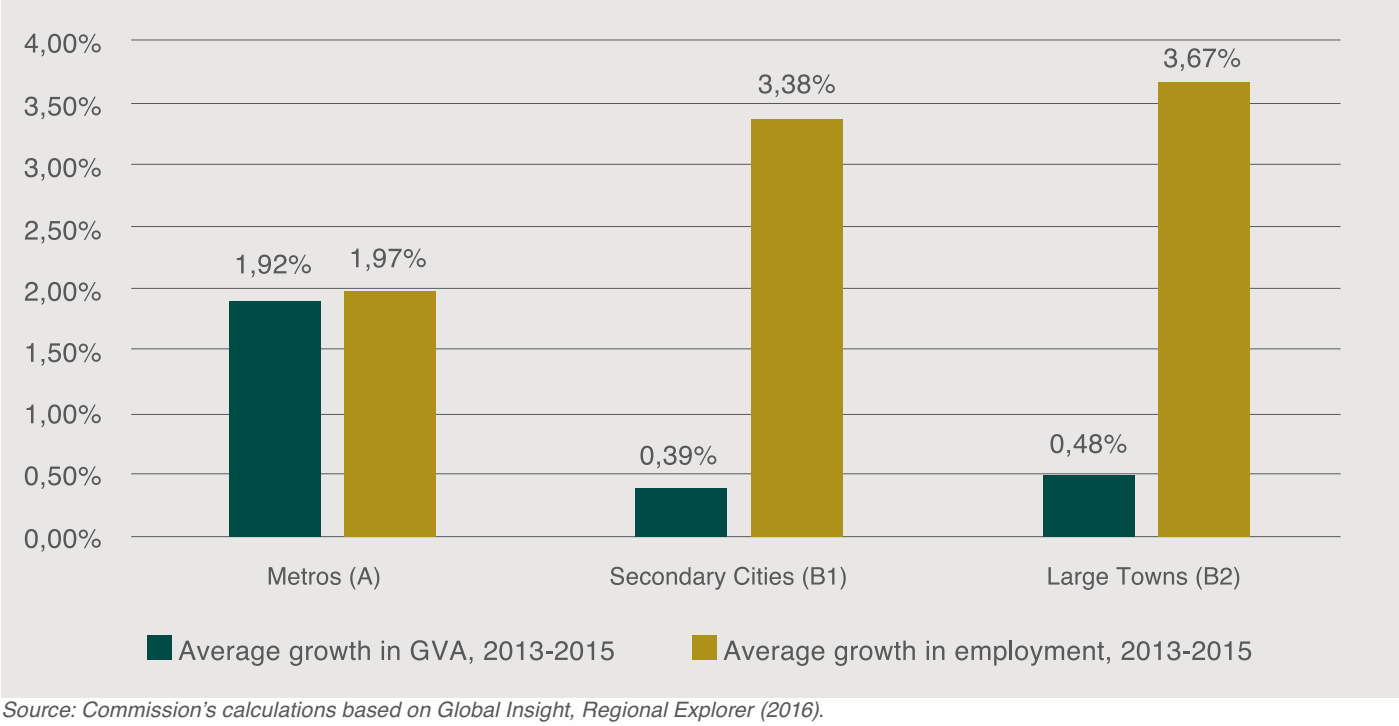
8.3 Findings and Discussion

8.3.1 Overview of urban labour market

At an aggregate level, economic growth has not been significantly employment intensive. Fourie (2013) notes that South Africa's employment coefficient over the period 1946 to 2007 was 0.5% implying that a given rate of GDP growth leads to a growth in employment (in the formal sector) of half the rate of GDP growth.

Figure 36 illustrates average growth in GVA over the period 2013 to 2015 relative to average growth in employment over the same period. In metros, the average growth in employment closely mimics the average growth in GVA. Secondary cities and large towns have similar trends, whereby they experience marginal average growth in GVA relative to the disproportionately greater growth in employment.

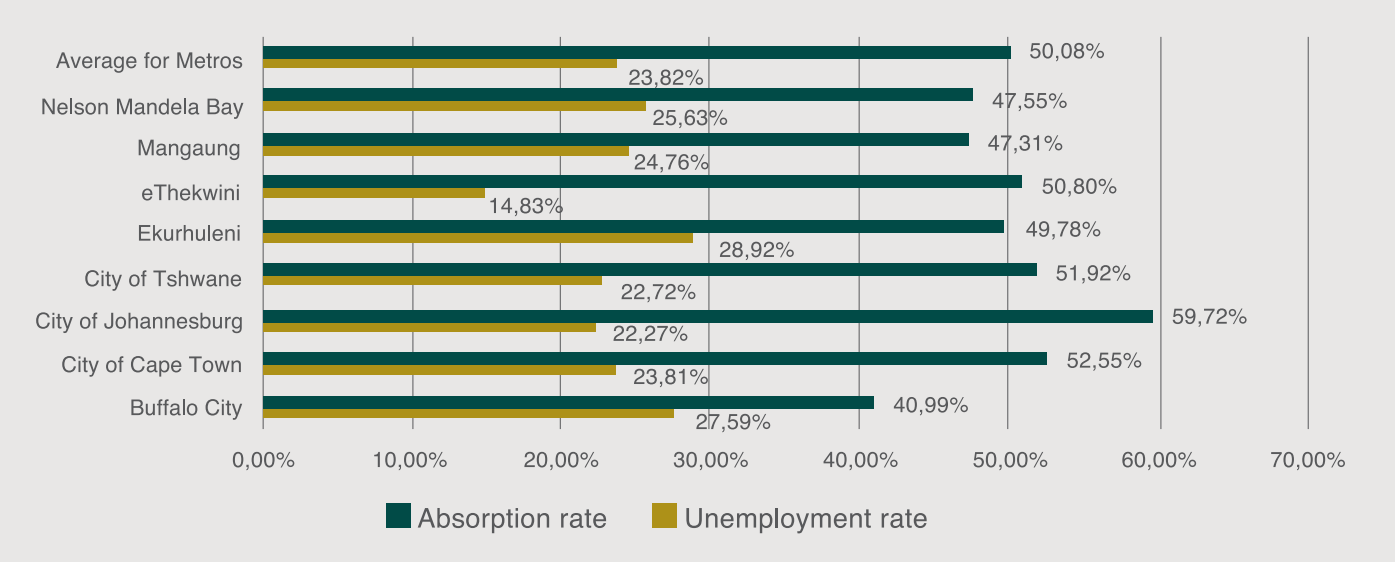
Figure 36. Average growth in GVA relative to average growth in employment in urban municipalities, 2013–2015



Source: Commission's calculations based on Global Insight, Regional Explorer (2016).

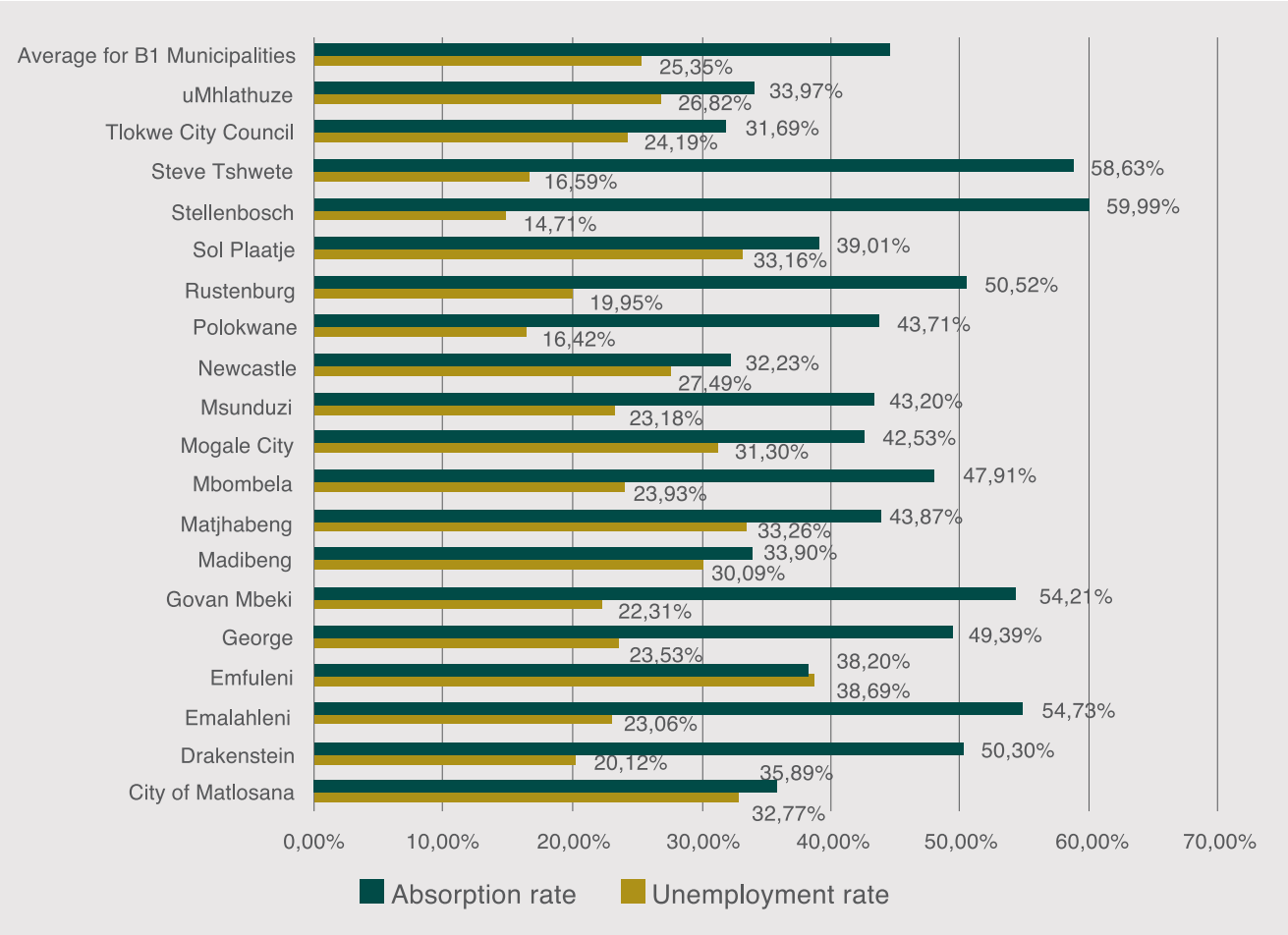
Related to the discussion on the employment intensity of growth is the labour absorption rate. This measure shows the proportion of the working age population that is employed. Figures 37, 38 and 39 illustrate the average unemployment and labour absorption rates in metros, secondary cities and large towns respectively over the period 2009 to 2015. On average, unemployment rates are lowest in metros (23.82%) and highest in secondary cities (25.35%) followed by large towns (24.83%) but the differences are marginal. Furthermore, metros tend to have, on average, higher absorption rates (50.08%) relative to secondary cities (44.42%) and large towns (44.22%). These labour absorption rates lend credence to the continued migration of rural inhabitants to the urban areas despite significant unemployment in urban areas. The variation of employment intensity and labour absorption rates across the different urban municipalities also indicates that some urban municipalities are more likely to create jobs than others. This variation may not only influence the decision by rural inhabitants to migrate or not, but also impacts on their choice of which urban municipality to migrate to.

Figure 37. Average unemployment and absorption rates in metros, 2009-2015



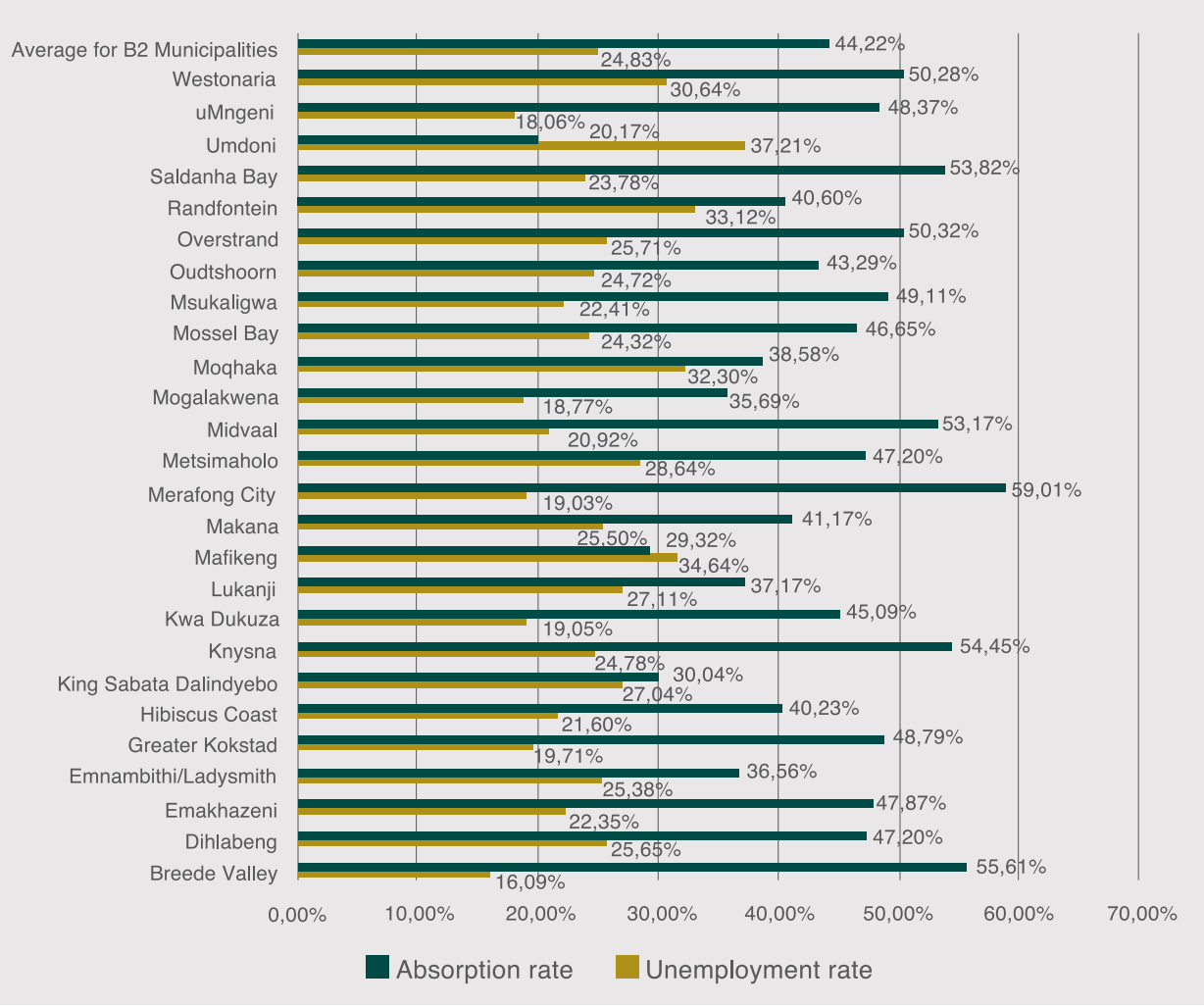
Source: Commission's calculations based on Global Insight, Regional Explorer (2016).

Figure 38. Average unemployment and absorption rates in secondary cities (B1), 2009-2015



Source: Commission's calculations based on Global Insight, Regional Explorer (2016).

Figure 39. Average unemployment and absorption rates in large towns (B2), 2009-2015



Source: Commission's calculations based on Global Insight, Regional Explorer (2016).

8.3.2 Effect of municipal spending on urban employment

Urban municipalities have under their control various fiscal levers that can create jobs through a range of interventions. Some of these job creation interventions may relate to support for small firms, supply chain strategies targeting key job creation sectors, fiscal and regulatory incentives, and labour market interventions such as creating opportunities for established businesses to absorb unemployed youth into formal employment. For the purposes of this study, the following fiscal levers are examined — spending on job creation and poverty alleviation initiatives (Expanded Public Works Programme and Community Work Programme) and infrastructure spending. The variable of interest for this study is spending on EPWP as municipalities have direct control over it.

The empirical findings show that the effects of the EPWP and CWP on the total level of employment are only statistically significant (as given by the p-values[28]) and positive for metros and not for secondary cities and large towns (Table 29). This result confirms the fact that EPWP projects tend to be concentrated in metros as well as the fact that the CWP tends to be more labour intensive and thus contributes more to creating work opportunities. In addition, infrastructure spending is not statistically significant for metros, secondary cities and large towns. It, however, shows economic significance, where infrastructure spending is positively associated with the total level of employment for metros and secondary cities but negatively associated with the total level of employment for large towns.

28 For an observed value of the t-statistic, the p-value is the smallest significance level at which the null hypothesis can be rejected (Wooldridge, 2009). For example, if α=0.05 (the significance level) is used as the cut off for hypothesis testing, then if p-value ≤ α the null hypothesis can be rejected, which means that there is only a 5% probability that the variable has no effect on the expected value of the outcome or the variable is statistically significant at the 5% level.

The reason for this is that large towns may lack the capability and capacity to implement infrastructure projects in a way that aligns to the national guidelines of ensuring that infrastructure projects are labour intensive. Apart from the dependency ratio, the study also found that the absorption rate, urbanisation rate, GVA and human capital generally all reflect the anticipated signs (see Table 28) in respect of their contribution to the total level of employment in urban areas.

Table 29. Regression analysis results

	Metros	Secondary Cities	Large Towns
Model			
Ln (GVA)	0.439**	-0.0109	0.335***
	(3.71)	(-0.17)	(4.54)
Urbanisation Rate	-0.433**	-0.57	-0.722**
	(-4.82)	(-2.05)	(-3.10)
Absorption Rate	1.985***	2.650***	2.192***
	(20.09)	(11.01)	(11.41)
Ln (Spending on EPWP)	0.190*	0.0196	-0.00295
	(2.68)	(0.19)	(-0.67)
Ln (Spending on CWP)	3.735**	-0.349	-0.3
	(5.38)	(-1.73)	(-1.77)
Ln (Infrastructure Spending)	0.0234	0.00347	-0.0137
	(0.86)	(0.09	(-0.85)
Infrastructure Index	-0.249	0.393	0.0356
	(-0.74)	(0.66)	(0.1)
Human Capital	0.154**	0.300*	0.431***
	(5.29)	(2.77)	(5.77)
Dependency Ratio	1.430*	0.363	-0.731
	(2.86)	(0.62)	(-1.67)
_cons	2.341	7.485***	1.328
	(1.12)	(5.65)	(1.12)
N	24	57	78
Overall R-Squared	0.9046	0.5442	0.8394
Prob>F	0	0	0

*p-value: * p<0.05, ** p<0.01,*** p<0.001; t statistics in parentheses*

Source: Commission's compilation

8.4 Summary and Recommendations

Given that the EPWP is having a positive effect on employment in metros, consideration should be given to expanding its employment creation role across other urban municipalities. This is particularly important given that previous Financial and Fiscal Commission research on Public Employment Programmes found that EPWP employment opportunities were concentrated in metros. Furthermore, whilst the EPWP is intended to be seen as a short-term job opportunity as opposed to long-term employment, what emerges from the results is that the programme has the potential to create economic value through its spill-over effects.

With a view to enhancing the employment effects associated with urban public spending, the Commission recommends that:

1. The employment creation role of the Expanded Public Works Programme should be expanded to specifically target secondary cities and large towns.

2. The departments of public works and cooperative governance and traditional affairs should carry out an assessment of the Expanded Public Works Programme integrated grant for municipalities to ascertain how the grant can be redesigned to encourage more secondary cities and large towns to apply for a bigger portion of this grant.


122.3354
108.365
99.3554
FINANCIAL
AND FISCAL
COMMISSION
For an Equitable Sharing
of National Revenue

FINANCIAL
AND FISCAL
COMMISSION

For an Equitable Sharing
of National Revenue

Chapter 9

Funding and Policy to Support Urban Informal Employment

Chapter 9: Funding and Policy to Support Urban Informal Employment

9.1 Introduction

Urbanisation within developing economies, including South Africa's, will be driven to a large extent by informal economic activities because of structural constraints and a low formal sector absorption rate. Migrants who are lured to the cities by high employment and income expectations tend to resort to informal employment for survival when these expectations are not met (Cox et al, 2004). This in turn creates policy dilemmas regarding whether to support or discourage informal employment activities.[29]

South Africa has not enjoyed the urban transformation envisaged by some economic development models because growing urbanisation has instead been accompanied by burgeoning informal employment. Urbanisation has not resulted in significant labour market 'urban advantages' i.e. the reduction of the informal sector and growth of formal sector employment as is generally predicted. In 2014, informal sector employment constituted an estimated 17% (using the narrow definition) and 36% (using the broader definition) of total non-agriculture employment and is expected to rise to 21% in 2030 (National Planning Commission, 2011).

Notwithstanding its sheer size, policy makers continue to view informal employment negatively as a survival or livelihood strategy rather than an integral part of job creation and urban growth (Turok, 2012). Informality is viewed as a threat to productivity, competitiveness, law and order and most importantly decent wages and fiscal receipts (Ghani and Kanbur, 2012). The sector continues to endure a number of structural and locational growth constraints including 'heavy-handed' municipal regulations (Charman et al, 2012). This has, in turn influenced government's policy approach to informal sector support where macroeconomic and fiscal policies are regarded as all-encompassing interventions that will eventually reduce informality disregarding the need for sector specific micro interventions to support informality (NPC, 2011).

As has been shown in chapter 8 of this Submission, South African cities remain the centres of attraction for many people searching for job opportunities and social services. In the absence of formal employment growth, urban informal employment is poised to remain the employer of last resort for most unskilled migrants in the medium- to long-term (Chen, 2012). The challenge for the cities, and government in general, is to recognise the contribution and harness the growth of the informal sector, as well as integrating informal workers into urban planning and economic policies in a manner that promotes inclusive growth. Informal employment and urban development are important aspects of economic development policy which according to Schedule 4 of South Africa's Constitution are concurrent areas of responsibility for national, provincial and local government. Thus the role of government in respect of informal employment entails various responsibilities spanning planning, regulation and stimulation. Approaches to supporting informal employment depend on the ideological orientation of respective governments towards the sector as a whole.

Against this background, this chapter asks the following questions: (1) How significant is the informal sector in contributing to urban employment; (2) What role do provinces and cities play in assisting informal employment and (3) What is the role of fiscal instruments in enhancing informal employment? The chapter assesses the policy orientation and effectiveness of existing funding and support programmes against a number of informal sector promotion goals.

29 For purposes of this study this relates to own account workers who work or employ other people in unprotected, unregistered and unincorporated micro enterprises.

9.2 Understanding Informality in an Urban Context

Literature on the informal sector has evolved immensely over the 20th century resulting in the empirical conceptualisation of definitions and measurements. Studies make a distinction between an 'enterprise-based definition', which refers to employment or production that takes place in unincorporated, small and unregistered enterprises and an expanded 'employment-based definition' which relates to employment without social protection both inside and outside the informal sector (ILO, 2002). This chapter uses the enterprise-based definition.

The informal sector and employment has a number of defining characteristics and further encounters a number of growth constraints. Informal enterprises are typically regarded as small, unregulated, less productive and unlikely to create new jobs. The major constraints experienced by the sector relate to strict municipal regulations, a lack of basic amenities and urban planning policies which fail to incorporate informal livelihood strategies in city plans. The highly concentrated nature of South Africa's economy further limits opportunities for businesses on the margins (Chen, 2012, Valodia, 2012, Charman et al, 2012). Constraining or disallowing the informal sector to grow, effectively undermines formal sector growth because informal enterprises mostly source their inputs from formal enterprises (Philip, 2010). Informal enterprises show considerable heterogeneity which requires multifaceted and coordinated policy approaches to promote informal employment.

Contrary to popular beliefs, informal employment plays a significant role in the economy. The sector accounts for 78% of non-agriculture informal employment in developing economies while the corresponding figure for South Africa is and 17% (Venek, 2012, Sparks and Barnett, 2010). [30] Table 30 shows that the informal sector employs between 2.2 and 2.5 million people out of South Africa's working population of 15 million. This constitutes the third largest employer after the community and social services and trade sectors in the formal economy. Informal employment has grown at an annual average rate of 3% between 1996 and 2016 relative to 2% in formal sector employment growth.

Table 30. Non-agriculture informal employment

	Own account	Employers	Employees	Unpaid workers	Share of total employment
QLFS (2016) (Q1)	1,118 000	313 000	1,055 000	41,000	2,573 000
	44%	12%	42%	2%	16.4%
SESE* (2013)	-	1,448 000	760 000	-	2,208 000
	-	66%	34%	-	15%

Source: Adapted from Rogan and Skinner (2016) and Burger and Fourie (2016) using Stats SA: QLFS (2016)

** Includes some agriculture*

The wages earned through informal employment are not as low as generally perceived. Table 31 shows that self-employed informal workers can earn as much as R4 684 per month. Average earnings for informal employees are 22% lower than the lowest official minimum wage (R1 500) but still above the national poverty line and earnings from social grants disbursements.

Table 31. Non-agriculture informal employment monthly earnings

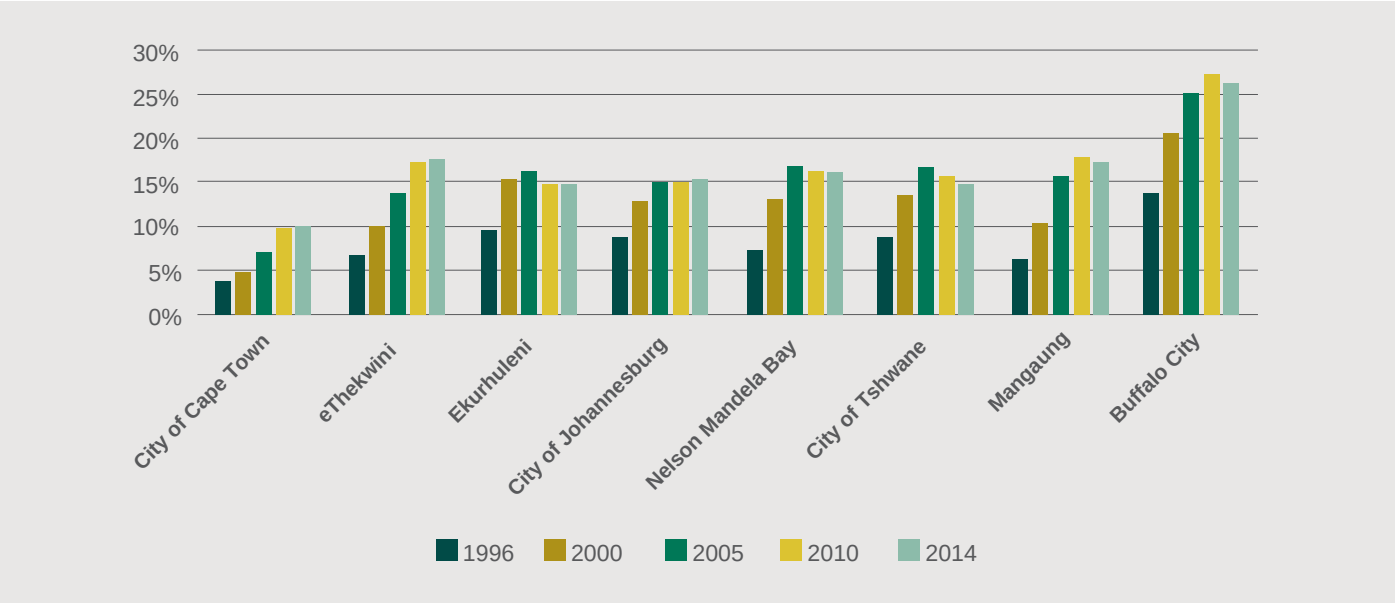
	Informal self employment	Informal employees	Total informal sector	Mean monthly minimum wage
Mean monthly earnings	R4, 684	R2, 704	R3, 462	R3, 290
% variance from average minimum wage	30%	-22%	5%	-

Source: Commission's calculations based on Rogan and Skinner (2016).

Informal employment has been a key feature of the urban labour market. Factors as wide ranging as high income and employment expectations, technological improvements, destruction of the rural economy, national policy bias towards the cities and market imperfections have been found to push rural dwellers into the urban informal sector (Elgin and Oyvat, 2013). However, for South African cities, high unemployment (as shown in chapter 8) continues to coexist with high levels of urbanisation and low informal employment. Informal employment in South African cities is relatively small compared to other African cities where the share of informal employment constitutes over 70% (Grabrucker et al, 2016).

30 Both the Quarterly Labour Force Survey (QLFS) and the Survey of Employers and Self Employed (SESE), which measure informal employment from an enterprise-based perspective, estimate total employment at 17% (2016) and 15% (2013) respectively (Stats SA, 2016 and 2013).

Figure 40. Share of informal employment by metropolitan area, 1996-2014



Source: Commission's calculations based on Global Insight Regional explorer database.

9.3 Research Methods

The study adapts Ghani and Kanbur's (2012) analytical framework for assessing informal sector policies. This framework emphasises four policy goals for promoting the linkage between urbanisation and the informal sector, including integration, intervention, institutions and entrepreneurship. Integration relates to the extent to which informality is incorporated in city planning, budgeting and financing. Intervention talks to the augmentation of support to informal sector workers with other social amenities and protection services. Institution refers to the manner in which policy makers involve informal sector workers as partners in development. Lastly, entrepreneurship is concerned with how government invests in education and physical infrastructure to promote job creation. The assessment in this chapter includes two additional evaluation criteria – the responsiveness of policy to constraints affecting informal enterprises and the nature of support provided by each sphere of government.

The analytical assessment is buttressed by a budget analysis that entails a review of old and current funding programmes for driving urban economic development and informal activities in particular. Each programme will be assessed in terms of size, sectoral focus, targeting mechanisms and spread.

9.4 Findings and Discussion

The following subsections provide an assessment of the current informal employment policy framework in accordance with the criteria outlined in the methodology section. The results of the assessment are summarised in Table 32.

9.4.1 Policy framework for supporting informal employment

a) National Development Plan

Chapter 3 of the NDP ambitiously aims to reduce unemployment from the current 25% to 6% and create 11 million jobs by 2030. Informal employment will constitute 21% of total employment in 2030 growing from the current 17%. The plan is however silent about how such growth will be attained and the specific support interventions required to drive such growth. Instead the NDP blurs the distinction between formal small businesses and informal employment activities without acknowledging the unique needs of the informal sector (Fourie, 2013). The overarching NDP policy thrust, in so far as supporting informal employment is concerned, seems be that of providing social services rather than unlocking opportunities for job creation by addressing the relevant growth constraints. Thus, the NDP barely meets any of the four policy goals of informal sector support framework outlined above.

b) National Informal Business Upliftment Strategy (NIBUS)

The National Informal Business Upliftment Strategy (NIBUS) is an overarching national policy framework, led by the Department of Small Business Development (DSBD). Its intentions are to rationalise and systematise intergovernmental support interventions to the informal sector. The strategy allocates responsibilities for supporting informal enterprises to the different government spheres, with national government responsible for facilitating policy alignment and consolidating support measures. The role of provinces is unclear but is largely assumed to be regulatory with co-financing of informal trading facilities. Municipalities are central to informal employment stimulation as they are responsible for LED, planning, regulation, allocation of trading spaces, provision of trading licences and law enforcement. The nature of support envisaged in the strategy includes provision of infrastructure, such as trading facilities, and financial and non-financial support targeted at the five priority sectors of retail, manufacturing, services, agriculture and construction. It is anchored upon five strategic pillars, each intended to address the underlying challenges affecting informal enterprises.[31] NIBUS in its broadest sense meets the criteria for holistic informal sector support as set out in Ghani and Kanbur (2012).

c) Gauteng Township Economic Revitalisation Strategy

Gauteng recently introduced the Township Economy Revitalisation Strategy specifically aimed at supporting and stimulating urban informal enterprises and employment. The strategy is multi-pronged focusing on numerous constraints affecting informal enterprises. Interventions range from those that include enterprise and entrepreneurship development support through incubation and training, unlocking infrastructure and land constraints, providing funding support and soliciting private sector investments and offering market support through preferential public procurement policies. Most notably the strategy employs a sectoral and spatial, or zonal, approach to informal sector development by identifying strategic sectors and areas where investments and support will be channelled. For instance certain townships, such as Winterveld in Pretoria, have been earmarked for investment in automotive activities while others will be manufacturing hubs (Mohlakeng in West Rand). Similar to NIBUS, the Gauteng Township Economic Revitalisation Strategy (GEDD, 2015) meets the requirements for a holistic informal employment support framework.

d) Local government informal sector policies

The local government policies and approaches for dealing with informal employment or enterprises are predominantly regulatory. These policies largely perceive the informal sector as homogenous, comprising only of trading activities. As a result, existing policies are driven from a legalistic perspective seeking to control and place informal traders within designated areas as per the city's respective land use development regimes. Broadly, the informal sector policies of the three cities (Johannesburg, Ekurhuleni and Tshwane) that were reviewed focuses on licensing of informal enterprise owners, allocation of trading spaces within designated streets and payment of rental fees for trading spaces. Significant emphasis is also placed on law enforcement to regulate violations of other important municipal by-laws (i.e. health and safety) and to police trading in restricted areas. Evidence from Charmam et al (2012) indicates that local government planning tools and regulation regimes often impose unfriendly rules which threaten informal employment when enforced. Notwithstanding the heavy handedness of these policies, there is an acknowledgement from local authorities that the informal sector contributes to job creation and must be supported. Each of the three cities have internal business units and programmes which offer a range of support measures to informal enterprises, particularly the construction of trading stalls.

The range of available informal sector support policies suggests that government, and cities in particular, recognise the contribution made by the informal sector to employment. These policies are however not sufficiently designed and coordinated to address specific growth impediments experienced by informal enterprises holistically.

31 These are those that entail legal and regulatory issues, intergovernmental co-ordination, enterprise development, stakeholder management and communication (DSDB, 2015).

Table 32. Informal employment support measures assessment matrix

Policy	Policy	Integration	Innovation	Institution	Entrepreneurship	Responsiveness	Nature of Support
National	National Development Plan	X	X	X	X	X	Social services
	National Informal Business Upliftment Strategy	✓	✓	✓	✓	X	Grant Funding, enterprise development
Provincial	Gauteng Township Economic revitalisation	✓	✓	✓	✓	✓	Grant Funding, regulations, market access, infrastructure etc.
Local government	Johannesburg informal sector policy	✓	✓	✓	X	X	Infrastructure, trading stalls Regulations
	Tshwane informal sector policy	✓	✓	✓	X	X	Infrastructure, trading stalls Regulations
	Ekurhuleni informal sector policy	✓	✓	✓	X	X	Infrastructure, trading stalls Regulations

Source: Commission's compilation.

9.4.2 Multi-sphere funding programmes for the informal sector

a) National programmes

There are numerous funding programmes at national level for supporting small businesses in general but only a small proportion of these is available for informal enterprises. Table 33 indicates that government spends nearly R5 billion each financial year to support small business through various departments and agencies. The informal sector is relatively under-prioritised receiving just under 2% of nationally available funding for small business development under DSBD.

Table 33. National and small enterprise development funding

	2016/17	2017/18	2018/19	Total MTEF
Dept of Human Settlement	750 000	817 000	965 400	2 532 400
Dept of Small Business Development	1 105 786	1 237 703	1 308 379	3 651 868
NIBUS	95 698	99 406	103 138	298 242
Dept of Mineral Resources	32 709	34 360	36 353	103 422
Dept of Tourism	188 931	188 002	198 777	575 710
Dept of Science and Technology	382 364	396 732	20 322	1 199 418
Dept of Rural Development	390 628	417 478	449 986	1 258 092
Dept of Forestry and Fisheries	1 741 345	1 814 957	1 911 363	5 467 665
Economic Development Department	213 124	223 780	236 759	673 663
Total	4 804 887	5 130 012	5 527 339	15 462 238

Source: Commission's compilation based on various Budget Reviews.

The budget allocation for the informal sector is used to implement two funding programmes under NIBUS. The first programme, the Shared Economic Infrastructure Facility (SEIF) is a cost-sharing institutional grant of up to R5 million, available to municipalities, provincial entities and corporates for providing infrastructure (i.e. storage facilities or shelter). The grant was introduced in 2016 with an initial budget of R30 million. It is available nationally to every institution and municipality (with the exception of provinces that must apply through a public entity) that are able to meet the 50% cost-sharing requirement. This grant embodies characteristics of job activation similar to the Jobs Fund under the custodianship of National Treasury and managed by the Development Bank of Southern Africa. The Jobs Fund also provides institutional grant support on a cost sharing basis to job creation initiatives, including those that include the informal sector. Unlike SEIF, the Jobs Fund was initiated with a hefty budget allocation of R2 billion. At the time of writing the department indicated that the take-up rate and spending on SEIF was low, partly because municipalities lacked resources to meet the cost-sharing requirements. Other reasons cited for the low appetite for SEIF by municipalities was poor consultation and the failure of municipal LED units to initiate projects.

The Informal and Microenterprise Development Programme is another grant funding stream under NIBUS available for application by individual informal enterprise owners. This programme was introduced in 2016 with an initial budget allocation of R65 million. It offers a minimum of R8 000 to a maximum of R80 000 grant funding to assist informal enterprise owners with marketing, product or stock improvements, tooling and machinery among other things. It is a national programme focused on the five sub-sectors (retail, manufacturing, services, agriculture and construction) which are considered strategic to the informal sector.

Over and above the two funding programmes the DSDB has been experimenting with, the Informal Traders Upliftment Project provides 18-month coaching, mentorship and infrastructure support to 1 000 informal traders across the nine provinces. Broadly the national informal sector funding programmes appear small in size and too thinly spread. It is also unclear why programmes intended for localised business activities such as informal enterprise are administered by a national government department. This approach contradicts the NIBUS ethos of decentralised implementation of informal sector support programmes and could explain the low grant uptake.

b) Provincial funding programmes: Gauteng Economic Development Department

Over and above the national funding programmes, provinces occasionally make funding available for supporting informal enterprises through the budgets of the departments of economic development. Gauteng province introduced the Gauteng Community Fund in 2011 to provide in-kind informal enterprise development support of up to R9 000 to qualifying enterprises. The programme provides business and financial skills to street vendors and 'spaza' shop owners on condition that they are registered with the Companies and Intellectual Properties Commission and have a valid tax clearance. These requirements for registration suggest that the programme is intended to formalise informal enterprises rather than address informal enterprise growth constraints per se. The Gauteng Community Fund is currently implemented by a provincial agency on behalf of the Department of Economic Development. This arrangement makes it difficult to assess the performance of the programme because allocations are made independently by the agency. Budget allocations for other important informal enterprise support programmes under the Gauteng Township Economic Revitalisation Strategy are similarly not transparent. Funding is allocated through various departmental business units which implement support programs on a project by project basis.

c) Local government funding programmes – cities of Tshwane, Johannesburg and Ekurhuleni

As indicated the local government agenda for supporting informal enterprises is based on the need to regulate, formalise and provide designated trading areas which can generate revenue for the cities. Local interventions are mainly focused on building trading stalls in the city centre and selected township informal market corridors. As such there is no institutionalised budget line item specifically allocated for supporting informal enterprises or building trading stalls. Instead the respective LED units of the metropolitan municipalities make annual project proposals to council for approval after which funding is made available if a project is approved. For instance the Cities of Tshwane and Ekurhuleni provide trading facilities to informal enterprise owners while the City of Johannesburg provides incubation and skills training in collaboration with the provincial Department of Economic Development.

9.5 Summary and Recommendations

Contrary to popular perceptions, informal employment plays a significant role in South Africa both in terms of employment and importantly income generation. Government (and local government in particular) has a clear developmental ensuring that informal enterprises are supported through conducive planning and regulatory regimes as well as appropriate funding programmes. To this end, there have been numerous policies introduced at national and provincial government level to explicitly support the informal sector as a whole. These policies aim to provide both financial and enterprise development support. They lack integration in their implementation approach and tend to focus on disbursement of grants and building trading stalls.

Only a small portion of nationally available funding for supporting small businesses is allocated to informal enterprises. Other available funding programmes within provincial departments and municipalities have not been regularised into stable budget line items whose size and impact can be evaluated over time. In the absence of meaningful growth in formal sector jobs, informal employment is likely to continue being a strong feature of urbanisation in South Africa. It is therefore of paramount importance that policy makers manage the linkage between rapid urbanisation and growing informal employment. Informality should be supported as an integral part of job creation and urban growth through interventions that address informal enterprise growth barriers, rather than being viewed as a survivalist strategy.

With respect to creating conditions for the promotion of urban informal employment, the Commission recommends that:

1. The national departments of Small Business Development, Cooperative Governance and Traditional Affairs and the provincial departments of economic development consolidate and regularise into long-term budget line items, and decentralise the different funding programmes (such as the Jobs Fund, the Informal and Micro-enterprise Support Programme and the Shared Economic Infrastructure Facility) for informal enterprise development currently residing within national and provincial departments and development finance institutions to metropolitan municipalities and secondary cities.
2. The Department of Small Business Development, in collaboration with the provincial departments of economic development must invest in a grant beneficiary information management system to minimise double dipping and to monitor the impact of various funding support programmes including the Jobs Fund, Informal and Micro-enterprise Support Programme and the Shared Economic Infrastructure Facility.
3. The Department of Small Business Development, as the custodian of informal enterprise development policy and coordination with the cities, should ensure that existing financial and non-financial support programmes holistically address informal enterprise growth constraints within the city space rather than focusing on formalising informal enterprises.

FINANCIAL
AND FISCAL
COMMISSION

For an Equitable Sharing
of National Revenue

Part 3:

Urban Municipalities and Urban Development

Chapter 10: ICT and City Governance

10.1 Introduction

The core mandate of municipalities is the delivery of basic services. To fulfil this mandate, municipalities need to run a basic administration. One of the biggest challenges confronting cities in particular is rapid urbanisation and the resultant increased demand for services. Local government legislation requires that municipalities maintain efficient, effective and transparent systems and that proper financial record keeping be implemented. This is particularly important in the case of urban municipalities, which generate significant own revenue through service charges and property rates taxes. One avenue through which efficient administration can be realised is through the implementation of an information and communication technology (ICT)-led approach to city administration. An ICT-led approach to city governance is however not an end in itself. It is not about a singular focus on achieving efficiencies, but rather can support municipalities achieve their mandate and in the process empower communities through greater access to information.

Whereas benefits can be derived from the more effective use of ICTs in government, the initial cost of investing in new technology is high and can be an inhibiting factor, especially for cash-strapped municipalities. This chapter examines the extent to which urban municipalities prioritise spending on ICT, what the key challenges are and whether the benefits derived from such spending warrant the use of fiscal instruments to assist municipalities to fund such expenditure. The objectives underpinning the research are to:

- Investigate the extent to which urban municipalities prioritise spending on ICTs to improve internal operations and city governance; and
- Understand the benefits and challenges of an ICT-led approach to city governance.

10.2 Research Methods

The analysis is based on both quantitative and qualitative research techniques. To determine the extent to which municipalities prioritise spending on ICTs, expenditure data on ICT from the National Treasury for 2014/15 was used. This data was ranked by size to determine the extent of spending per urban municipal category: metropolitan (Category A), secondary city (Category B1) and large towns (Category B2). It was also used when carrying out the data envelopment analysis (DEA) described below.

To understand the benefits of an ICT-led approach to city governance, a two-pronged approach was used. First, the economic value of ICT spending and the extent to which it affects municipal efficiency was investigated using a two-stage empirical approach, namely the DEA[32] approach along with a Tobit regression model[33]. The model framework follows a similar approach taken by Shao and Lin (2002) and Sung (2004) who looked at how technology-related spending affected firm and local government efficiency respectively. Essentially, the DEA method assesses the relative efficiency of decision-making units (DMUs), with respect to urban municipalities in this chapter, by generating a production frontier, where DMUs are either maximising output for a given set of inputs or minimising their inputs for a given set of outputs. A Tobit regression analysis is then used to determine what influences the efficiency, or rather to estimate the environmental factors that influence the efficiency scores, which are generated by the DEA analysis. In this research, the variable of interest is municipal ICT spending. In line with the Financial and Fiscal Commission research conducted in 2011 on the factors affecting municipal efficiency, other independent variables included in the regression are population density, gross value added, intergovernmental transfers as a percentage of total revenue, audit outcomes, location and vacant posts as a percentage of total posts. Data for this quantitative analysis was sourced from the Global Insights database.

32 The non-parametric DEA technique is a method that can be used to assess technical efficiency.

33 The Tobit model is designed to estimate linear relationships between variables when there is either left- or right-censoring in the dependent variable (also known as censoring from below and above, respectively). Censoring from above takes place when cases with a value at or above some threshold, all take on the value of that threshold, so that the true value might be equal to the threshold, but it might also be higher. In the case of censoring from below, those values that fall at or below some threshold are censored. The Tobit regression model is thus also referred to as a censored regression model. (Source: http://stats.idre.ucla.edu/stata/dae/tobit-analysis/)

Second, a combination of face-to-face, telephonic interviews and written inputs were used to understand what municipalities perceive to be the value of an ICT-led administration. These interviews were also used to get a sense of the challenges experienced in respect of an ICT-led approach to city governance. Ten municipalities were consulted, namely eThekwini Municipality (category A, KwaZulu-Natal), City of Cape Town (category A, Western Cape), Nelson Mandela Bay Municipality (category A, Eastern Cape), Msunduzi (category B1, KwaZulu-Natal), George (category B1, Western Cape), Mbombela (category B1, Mpumalanga), Overstrand (category B2, Western Cape), Merafong (category B2, Gauteng), Midvaal (category B2, Gauteng) and Breede Valley (category B2, Western Cape). These municipalities were selected to ensure coverage of all urban municipal categories and spread in terms of geography.

10.3 Findings and Discussion

10.3.1 Relative prioritisation of ICT spending across categories of urban municipalities

The national government, particularly the justice cluster (consisting of police, defence, justice, correctional services, and the National Prosecuting Authority) is responsible for the largest portion (62%) of ICT spending (BMI-T, 2015). In 2012, the ICT sector contributed 2.9% to gross value added (GVA). This is higher than for example Mexico with 2.77% of GVA but lower than the average for OECD countries (5.5% of GVA) or Korea at 10.7% of GVA (OECD, 2015).

At the local government level, 65% of ICT spending occurs in urban areas, particularly within the better-resourced metropolitan municipalities (BMI-T, 2015). As at 2014/15 urban municipalities spent R2.7 billion on ICT. Figure 41 shows the percentage of operating expenditure that urban municipalities spend on ICT as at 2014/15. At 1.97% of operating expenditure, metropolitan municipalities spend relatively more on ICT when compared to secondary cities and large towns. This is followed by large towns who allocate 1.1% of their operating expenditure towards ICT. Secondary cities spend 0.88% of their operating expenditure on ICT.

Figure 41. Percentage spending on ICT by municipal category, 2014/15

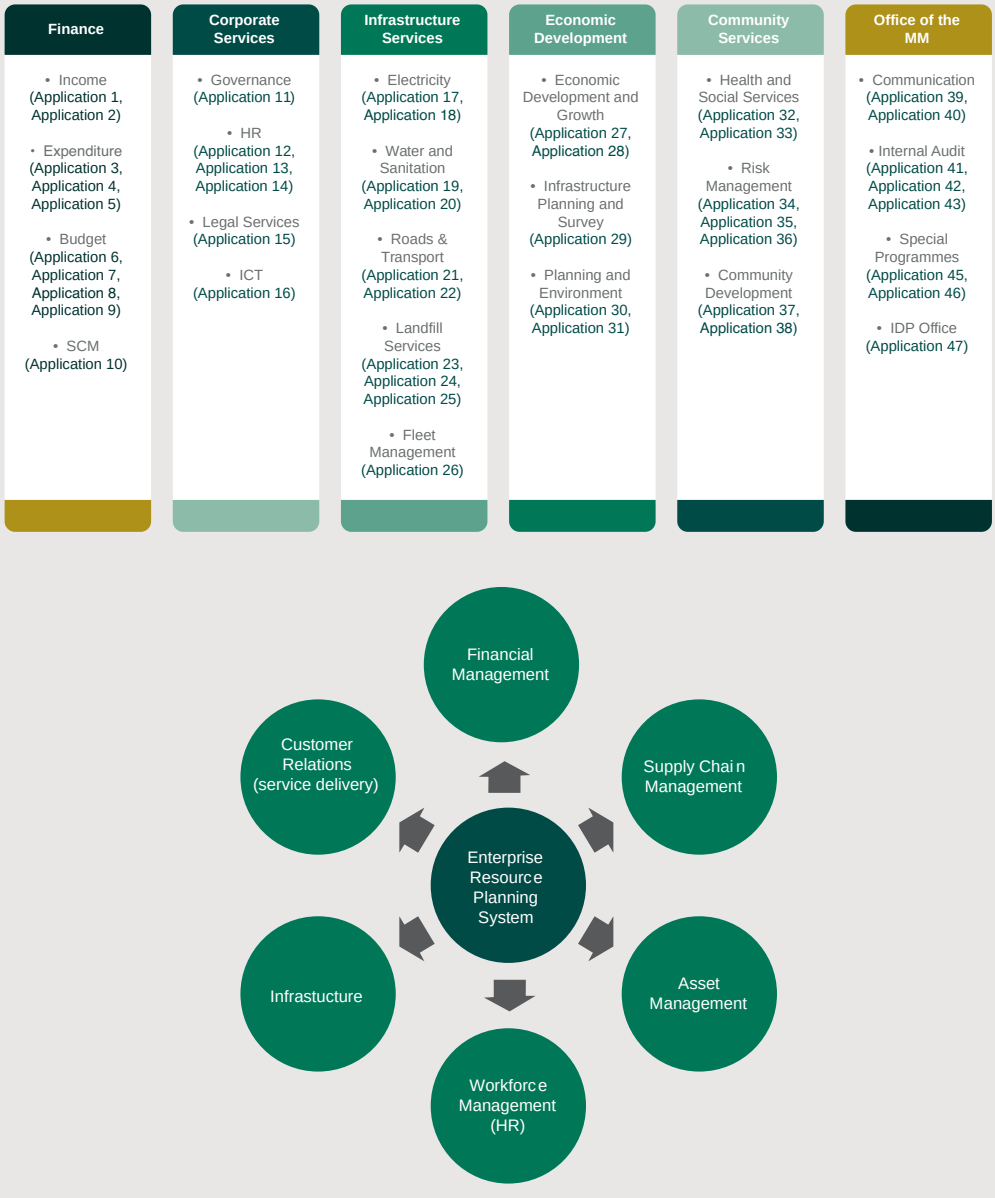
Source: Commission's calculations based on National Treasury Local Government Database, 2014/15.

Various intergovernmental fiscal tools exist to assist municipalities to modernise and cope with the demands associated with maintaining an efficient and effective administration. For example, 9% of the local government equitable share allocation is in respect of the institutional component which is meant to assist and supplement the ability of municipalities to cover running costs. There are also two conditional grants, namely the Municipal Systems Improvement Grant (MSIG) and the Financial Management Grant (FMG), that provide funding to municipalities to enhance financial and general administration systems. Generally, however, municipalities fund ICT spending from own revenue.

One of the big issues that arose in interactions with municipalities regarding ICTs is the implementation of the municipal standard chart of accounts (mSCoA) regulations which need to be implemented by 1 July 2017. In terms of the regulations, the objective of mSCoA is to, "provide for a national standard for the uniform recording and classification of municipal

budget and financial information at a transaction level by prescribing a standard chart of accounts for municipalities and municipal entities" (RSA, 2014). The financial and other systems used across many municipalities are not compliant with the requirements of mSCoA and as such municipalities have had to channel resources to ensure they will be able to comply come July 2017. Municipalities have thus been trying to move away from numerous standalone, legacy systems (Figure 42) to systems that allow for greater integration (as illustrated by bottom panel in Figure 42). From a systems point of view, the implementation of mSCoA is thus ICT intensive. No specific funding instrument is available to municipalities to fund the implementation of mSCoA. The Financial Management Grant which focuses on "…placement of financial management interns and the modernisation of financial management systems" (National Treasury, 2016), does allow support for mSCoA implementation. However, many of the municipalities interacted with indicated that this grant was largely focussed on the placement of finance-related interns.

Figure 42. Array of legacy systems compared to relative integration of an enterprise resource planning[34]-type system



34 An enterprise resource planning system allows an organisation to manage its operations/activities in an integrated manner usually using technology/software.

10.3.2 Benefits of an ICT-led approach to city governance

10.3.2.1 Economic value of ICT spending

As shown in Table 34, only eight of the [34] municipalities sampled are efficient with the highest number of efficient urban municipalities in 2014/15 being located in metropolitan areas. Whilst the number of municipalities found to be efficient remains low, the average efficiency score is 82%, which suggests that municipalities are, on average, using the bulk of their resources efficiently and only inefficiently spending about 20% of their resources.

Table 34. Efficient and inefficient urban municipalities, 2014/15

Municipality Name and Category	Efficiency Score	Municipality Name and Category	Efficiency Score	Municipality Name and Category	Efficiency Score
City of Cape Town (A)	100.00%	Matjhabeng (B1)	94.72%	Mogale City (B1)	78.28%
City of Tshwane (A)	100.00%	Emfuleni (B1)	93.83%	Saldanha Bay (B2)	77.32%
City of Ekurhuleni (A)	100.00%	Midvaal (B2)	93.19%	Mangaung (A)	77.28%
eThekwini (A)	100.00%	Mbombela (B1)	90.29%	Randfontein (B2)	76.59%
Madibeng (B1)	100.00%	Govan Mbeki (B1)	89.21%	Newcastle (B1)	69.44%
Metsimaholo (B2)	100.00%	Merafong City (B2)	87.32%	Buffalo City (A)	66.26%
Oudtshoorn (B2)	100.00%	Breede Valley (B2)	84.96%	Drakenstein (B1)	63.80%
Polokwane (B1)	100.00%	Mossel Bay (B2)	84.87%	George (B1)	63.60%
Rustenburg (B1)	100.00%	Nelson Mandela (A)	83.11%	Stellenbosch (B1)	62.99%
Knysna (B2)	97.53%	Steve Tshwete (B1)	82.34%	Overstrand (B2)	59.08%
				Msunduzi (B1)	56.44%
				Sol Plaatje (B1)	55.88%
				Tlokwe (B1)	51.85%
				uMhlathuze (B1)	46.98%
Number of efficient municipalities: 8					
Efficient municipalities as % of total number of municipalities in the sample: 23.53%					

Source: Commission calculations.

Table 35 presents the Tobit regression results for three models. The first model is the full model, which takes into consideration socio-economic factors (measured by GVA, population density and location), the role of ICT, intergovernmental factors (intergovernmental transfers as a percentage of total revenue), institutional capacity (measured as vacant posts as a percentage of total posts; part-time councillors as a percentage of total councillors) and the financial management of municipalities (measured by municipal debt and audit outcome). The second model extends the full model to also include interaction terms. In particular, it considers the interaction between ICT and location so as to establish whether or not the effect of ICT depends on the location of the urban municipality. The third model considers a quadratic specification of the ICT variable so as to determine whether or not there is a threshold effect of ICT spending, in other words, whether or not the effect of ICT spending diminishes beyond a certain point.

The variable of interest, ICT, has a positive impact on efficiency. The effect is, however, slightly weaker in magnitude and not statistically significant when interaction terms and the quadratic specification of the ICT variable are considered. In other words, the effect of ICT on efficiency does not seem to depend on the location of the municipality and according to the third model there appears to be no threshold effect, which suggests that the effect of ICT spending on efficiency does not diminish beyond a certain point in time. This could be due to current low spending on ICT across the majority of municipalities.

Table 35. Explanatory variables used in second stage Tobit regression analysis

	Model 1	
	Coef.	Robust Std. err.
Model		
Log of GVA	0.2437444**	0.0703073
Population density	-0.0000395	0.0001064
ICT (as % of total OPEX)	10.87148*	4.862188
ICT^2		
IG transfers as % of total revenue	0.4099086	0.3786679
Vacant Posts as % of total posts	-0.3677159	0.2911877
% of Part-time councillors as % of total councillors	-0.0823779	0.1340099
Location:		
Metro (reference group)		
B1	0.2052683*	0.0844514
B2	.5914679***	0.1324426
Audit Outcomes:		
Unqualified (reference group)		
Qualified	-0.0293584	0.0510979
Adverse	0.2257467	0.164058
Disclaimer	0.2483702***	0.0497062
ICT X B1		
ICT X B2		
Constant	-5.411956**	1.66754
Sigma		
Constant	0.1176242***	0.0185326
PseudoR[2]	3.95	
Observations	32	
Prob>F	0.00	
* p<0.05, ** p<0.01,*** p<0.001[3]		

[3] For an observed value of the t-statistic, the p-value is the smallest significance level at which the null hypothesis can be rejected (Wooldridge, 2009). If α=0.05, the p-value, is used as the cut off for hypothesis testing, then if $p \leq \alpha$ we reject the null hypothesis, which means that there is only 5% probability that the variable has no effect on the expected value of the outcome.

10.3.2.2 Benefits of an ICT-led approach from a municipal perspective

The municipalities that were interviewed stressed that the benefits derived from an ICT-led approach to city governance are broader than just efficiency gains. Some of the benefits described are listed in Table 36. Essentially the benefits described correspond with what the broad literature on the benefits of an ICT-led approach to city governance suggests.

Table 36. Benefits of ICT-led approach to city governance

• More effective service delivery – scheduling, planning works orders
• Faster and more effectively able to deal with citizens' queries and provide responses
• Empowers people by providing greater access to information and can therefore lead to better demand management
• Accuracy in financial reporting and budgeting, including accountability
• More reliable asset registers and work towards improved asset management
• Efficiency in supply chain management processes
• Improved document, records and correspondence management
• Efficient communication (internally, externally and with services)
• Cost saving approach to resources (paper, telephone, VoIP, time management)
• Backups and disaster recovery better enabled

Source: Commission's compilation.

10.3.3 Obstacles hampering ICT-led approach to city governance

The results of the preceding analysis show that ICT is strongly and positively related to the efficiency of an urban municipality. However, the quantitative analysis does not provide insight into the effectiveness of ICT spending or the challenges that urban municipalities experience with respect to an ICT-led approach to city governance. In order to gain an understanding of these dimensions, a combination of face-to-face and telephonic interviews with a selection of municipalities were undertaken with the following key issues emerging from the interactions:

a) Clear variation in utilisation of ICT across the different types of urban municipalities

Metros have sophisticated ICT systems in place and are now at the stage where ICT is being used to shift towards broader smart city initiatives and to revolutionise the way that services are delivered. At the other end of the spectrum are urban municipalities who are under-resourced and underfunded and are just trying to implement and standardise the use of basic ICTs among municipal employees – these municipalities are at the initial stages of trying to establish and stabilise the use of such systems.

b) Lack of recognition and support from senior management in terms of the value that ICT can unlock

This affects the prioritisation and funding for ICT and was an issue that emerged during interviews with municipalities. Issues around poor government buy-in also emerge in the World Economic Forum's latest, 2016 Global Information Technology Report which found that in order for greater impact of ICTs to be reaped more significant buy-in from government is required. South Africa ranks poorly in respect of two key pillars namely, the importance of ICT to government's vision (ranked 116 out of 139 economies) and government's success in ICT promotion (ranked 111 out of 139 economies) (WEF, 2016). Generally, where there is limited appreciation by senior managers of a municipality and municipal councils for the role that ICTs can play in service delivery and administration, funding is then also limited.

c) Cost of compulsory requirements in respect of the implementation of mSCoA

As mentioned in section 3.1 above, implementation of mSCoA demands a certain level of ICT sophistication and the use of an integrated, ERP-type system is recommended. This is costly, especially for secondary cities and large towns. Funding alone will not ensure that benefits are derived from the roll out of mSCoA and the standardisation of municipal account classifications. Other factors such as lack of capacity and capability as well as the complexity of moving from legacy systems to an integrated ERP-type system, all play a role. Apart from the funding burden presented by attaining mSCoA compliance, from an audit point of view, municipalities that do not adhere to mSCoA, may find themselves facing audit queries when the local government audit findings for 2016/17 are tabled in June 2018. Additionally, as new systems are implemented, change management is required to transition municipalities to new operating methodologies. Issues of change management emerged especially from secondary cities and large towns. Better capacitated and resourced municipalities, such as the metropolitan municipalities are better at managing this. However, in other types of urban municipalities, shifts to new systems and approaches to work are not well managed and result in non-optimal or failed implementation.

d) Attracting, recruiting and retaining ICT skills

Generally, municipalities list challenges in terms of finding suitably skilled staff. This has resulted in ICT directorates that are strained and operate below what can be considered optimal. An assessment of the number of ICT staff relative to the number of users, conveys the pressure that most ICT directorates operate under. For example:

- Msunduzi has 11 ICT staff members relative to the 1 200 users that they have to serve;
- In George, approximately 700 users are serviced by a staff complement of four ICT-related personnel;
- Overstrand Municipality has 1 200 users and four staff members;
- The City of Cape Town has 21 814 active users relative to 750 staff members; and
- Nelson Mandela Bay Municipality has approximately 4 000 users and just under 100 ICT staff.

a) Decentralised management of the ICT function is problematic

The effect of decentralised management of ICT is that different units within a municipality procure their own ICTs (hardware, software et cetera) as opposed to it being done centrally by, for example, an ICT unit within a municipality. This hampers the ability to reap economies of scale when purchasing ICTs. It also has the potential of creating a situation where different departments are buying different ICTs to perform similar functions. This piecemeal approach also leads to an underestimation of ICT spending.

b) Exemplary cases of peer learning

Instances where more advanced municipalities are allowing lesser-resourced counterparts to piggyback on their ICT resources and expertise, exist. Examples of where the strengths of better-resourced municipalities are used to benefit less resourced peers include in the area of disaster recovery. Nelson Mandela Bay indicated that the municipality is in the process of upgrading its network infrastructure and telephony system. Once this is completed, local municipalities in the area will be allowed to connect using the metro's infrastructure. Most of the municipalities interacted with indicated that they are members of district-wide ICT forums through which advice and ideas are shared. Rewards and incentives should be provided to encourage similar behaviour.

10.4 Summary and Recommendations

In terms of the economic value of ICT spending the preceding analysis confirms, in accordance with literature on the subject, a positive and statistically significant relationship between ICT spending and municipal efficiency. However, the value of an ICT-led approach is broader than just efficiency benefits. It is instead viewed more holistically by municipalities and is not seen as an end in itself but rather as a means to ensure more effective governance, community empowerment and overall transformation. Unfortunately, the degree to which an ICT-led approach to urban governance can yield benefits, is largely based on the degree to which top management (municipal executive committees and councils) see the key role that ICT can play in revolutionising service delivery in a municipality. As interviews with municipalities show, this represents a significant challenge.

One of the key issues that emerge when exploring the issue of ICT spending in municipalities is the implementation of mSCoA, a local government financial management reform which is ICT-intensive. Implementation of mSCoA is being uniformly implemented across all municipalities and for urban municipalities places a significant financial burden on secondary cities and large towns. In relation to the above, change management is critical in shifting from traditional, legacy systems to more integrated ERP-type systems. Most municipalities do not have the capacity and capability to effectively transition staff and all other organisation-wide resources towards a new approach to business. The result of inadequate management of change is the potential for non-optimal or failed implementation of new models. Fortunately, whilst costs associated with ICT systems are high, peer learning mechanisms do exist and examples of smaller, less resourced municipalities benefiting from the ICT expertise and capital of more capacitated municipalities does exist.

In order to enhance the intergovernmental instruments, institutional and governance arrangements pertaining to the provision and maintenance of information and communication technology in urban municipalities, the Commission recommends that:

1. National Treasury should ensure that allocations for assisting municipalities with municipal standard chart of accounts implementation through the Financial Management Grant be ring-fenced and deliberately biased towards lesser resourced urban municipalities who struggle under the financial burden of attaining compliance with the municipal standard chart of accounts financial reform.
2. In the absence of a differentiated approach to the roll out of the nationally driven municipal standard chart of accounts regulations, National Treasury should ensure that technical assistance is provided to lesser resourced municipalities to assist with change management. To this end National Treasury should deploy technical advisors to the most under capacitated and under resourced municipalities for a short period of time to assist with the shift to municipal standard chart of accounts compliance. This will assist in strengthening the successful implementation of this local government financial management reform.


C/CE
MU
%
+/–
MRC
M–
M+
7
8
9
4
5
6
1
2
3
0
.
=
+

FINANCIAL
AND FISCAL
COMMISSION

For an Equitable Sharing
of National Revenue

Chapter 11

Financing of Urban Municipalities and Own Revenue Diversification

Chapter 11: Financing of Urban Municipalities and Own Revenue Diversification

11.1 Introduction

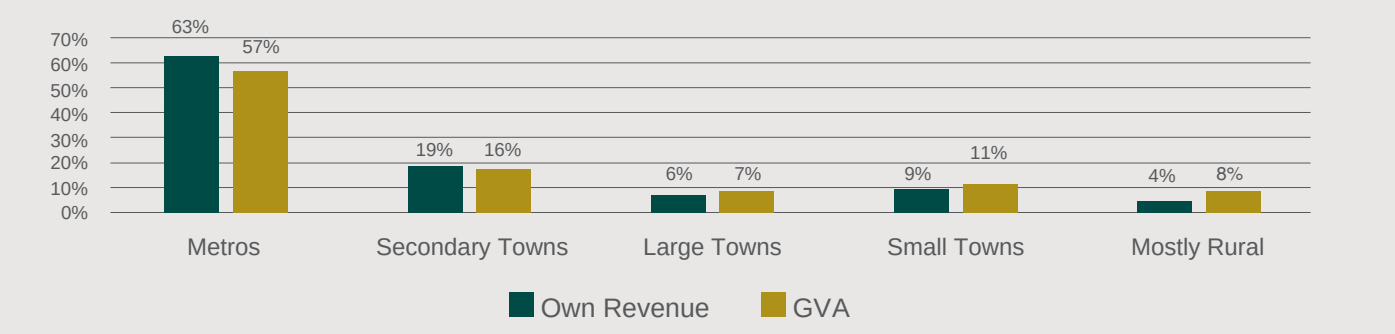
The twin challenges of rapid urbanisation and the ongoing downturn in economic activity have placed tremendous fiscal pressures on the nation's municipalities. Urbanisation, which is characterised by population concentrations especially in large cities, has increased demand for basic services. Transfers are increasingly constrained in meeting the expenditure needs of many municipalities. Cuts in transfers due to government expenditure reprioritisation in the 2016 medium term expenditure framework coupled with stagnant property tax bases and sharp increases in the bulk prices of utilities is challenging the ability of municipalities to continue with current levels of service delivery and the maintenance or upgrading of infrastructure that underpins these services.

Metros and secondary cities are also experiencing substantial growth in the number of households. With household growth averaging 22% for metros and 20% for secondary cities between 2011 and 2016, the greatest infrastructure requirements are in these large cities, while the cost of providing such infrastructure including repairs and maintenance is also considerable. A study by the Financial and Fiscal Commission and the South African Local Government Association in 2016 estimated that the infrastructure requirements in metros and secondary cities in 2016 alone was close to R30 billion, while the combined capital requirements for B2, B3 and B4 municipalities was estimated at R17 billion. Thus, secondary cities and metros need to invest in infrastructure to attract new investment and build dynamic economies, increase employment, create vibrant communities and improve livelihoods. The current funding model for large cities has, to a large degree been limited when it comes to catering for these capital needs.

The ability of these cities to deal with the volatile demand for urban services depends, to a large extent, on the availability of financial resources. Attracting extra resources to cities, beyond the conventional sources, is critical to unlocking their growth potential. As urban challenges increase, so does the need for financial resources especially for infrastructure development. Urban municipalities rely on transfers as well as own revenue sources including rates, surcharges, fees, and borrowing. Although large cities have demonstrated significant fiscal effort (relative to other categories of municipalities[35]), own revenue sources are still insufficient. Figure 43 shows that in 2015/16 metros collected 63% of total municipal own revenues from their gross value added share of 57%, while secondary cities generated 19% of municipal own revenues from GVA share of 16%. On the other hand, large towns, small towns and rural municipalities have own revenue shares less than their GVA shares, indicating they do not optimally exploit their economic bases. Thus, metros and secondary cities are making relatively significant efforts to generate own revenues while large towns, small towns and rural towns are lagging behind. Given that metros and secondary cities are demonstrating significant fiscal effort, and considering that own revenues and transfers cannot be infinitely expanded, finding alternative revenue sources becomes key and so does developing alternative own revenue sources.

35 To illustrate this point, fiscal efforts of different municipal groups is compared (the ratio GVA share and own revenue share is used to proxy fiscal effort). A municipality whose own revenue share is equal to its GVA share, demonstrates significant fiscal effort.

Figure 43. Fiscal effort: GVA and own revenue per municipal category, 2015



Source: Commission's calculations.

The weaknesses of the current funding framework for large cities includes the following:

- Despite secondary cities facing their own unique challenges such as infrastructure, public transport and housing, the non-metro urban space does not show any significant funding differentiation between secondary cities and other smaller municipalities. The transfer system treats secondary cities in the same manner as other municipalities – i.e. 'one size fits all'. For example, the Municipal Infrastructure Grant, the biggest infrastructure transfer, imposes similar conditions on secondary cities and smaller municipalities. In short, the current funding model does not make use of a thorough, data-driven differentiation of municipalities with varied capacities and contexts.
- Secondary cities miss out on certain funding streams. A case in point is the Urban Settlements Development Grant and Public Transport Infrastructure Grant (PTIG) which are meant for metros only. Despite including large portions of rural areas and playing a significant role in reducing poverty in rural surroundings, secondary cities also miss out on the rural funding window meant for the 23 priority districts (National Treasury, 2016).
- The current local government funding model also allocates fewer resources to secondary cities than metros and smaller municipalities. Secondary cities receive the lowest per-poor-household capital grant allocations than metros and smaller municipalities (National Treasury, 2016).
- Another challenge in the funding of large cities is the general fuel levy. National Treasury once promised a new permanent revenue handle for metros to replace the RSC levies (scrapped some 10 years ago), but to date nothing has materialised. In metros, the RSC levies were replaced by a fuel levy whose sharing is less imprecise. A metro share of the levy is proportionate to total fuel sales within its jurisdiction. The fuel levy is a less buoyant revenue source than its predecessor tax instrument — the RSC levies (Dawood and Pahwa (2005); and is not linked to any economic activity.

National Treasury (2008) suggests that the capital funding gap for large cities can be closed by leveraging on non-traditional revenue sources. Elsewhere in the world, municipalities have embraced many alternative financing instruments including borrowing, pooled financing schemes, public-private partnerships (PPPs), among others. Although the country's laws provide powers for municipalities to borrow for capital investments, many urban municipalities have not exploited this alternative revenue source to its potential even when they are financially sound. South Africa's 29 largest cities (21 secondary cities and eight metros) have been conservative borrowers. The 29 largest cities account for approximately 80% of the country's GDP, yet their capital investments as a percentage of GDP is a mere 0.8% while their (municipal) debt-to-revenue ratio stands at 1%. Another indicator that shows that large cities have a great potential for accessing credit markets is the borrowing sustainability measure, i.e. debt-service-cost to own-revenue ratio. This ratio ranges between 4.4% and 9.4% for metros, well below the international acceptable ratio of 15% (Mahabir and Mabhena, 2014). In 2012/13, external loans accounted for only 2% of revenues for metros, and 1% and 0.9% for B1 and B2 municipalities, respectively. Despite these low borrowing figures, municipal borrowing is diminishing, especially in metros wherein borrowing levels have declined from 4% of GDP in 1994/95 to 2% in 2013/14.

These few facts about the inability of cities to compliment traditional revenue sources with non-conventional sources or even leverage on capital markets when they have huge infrastructure needs and backlogs, raises a number of research issues. Can the present own revenue sources be further exploited? Can new own revenue sources be found and exploited? What are the alternative and innovative financing mechanisms for large cities? How can large cities with no, or limited, access to financial markets be enabled to leverage on credit finance to augment fiscal transfers? Can a new and coherent funding model be developed? The aim of this chapter is to shed light on these questions and in particular evaluate alternative revenue sources for financing metros and secondary cities.

11.2 Research Methods

The research methods used are both qualitative and quantitative. First the chapter evaluates the extent of revenue diversity using the Hirschman-Herfindahl Index (HHI). The HHI is calculated by following these steps:

- Dividing total revenues into different categories: property taxes, service charges, rentals of facilities, investment earnings, fines, licence fees and other revenues
- Obtaining the revenue share of each category, i.e. dividing each of the revenue heads by total tax revenue
  Squaring each revenue share
- Summing up all the squared revenue shares to form the HHI
- To obtain the revenue diversification index, the HHI is subtracted from 1. The resultant revenue diversification index is then multiplied by 100 to allow for compression.

The HHI is constrained between zero and one, with zero implying a municipality relying on a single source of revenue and one indicating a perfectly diversified revenue structure.

In evaluating alternative financing mechanisms for large cities, the analysis looks at new financing approaches identified in the literature and used in other countries, and subject each to further evaluation using the criteria adapted from the literature, including United Nations (2009). To identify constraints to municipal participation in the credit market, a generalised least squares (GLS)[36] borrowing model is estimated with both demand- and supply-side factors as arguments.

The study also had recourse to qualitative information from interviews with managers in large cities and the Public Private Partnership (PPP) unit at National Treasury. The main questions to these institutions centred on best practices for financing urban areas, risks and constraints to accessing capital markets and incentives that large cities can take advantage of to access non-traditional financing instruments.

11.3 Findings and Discussion

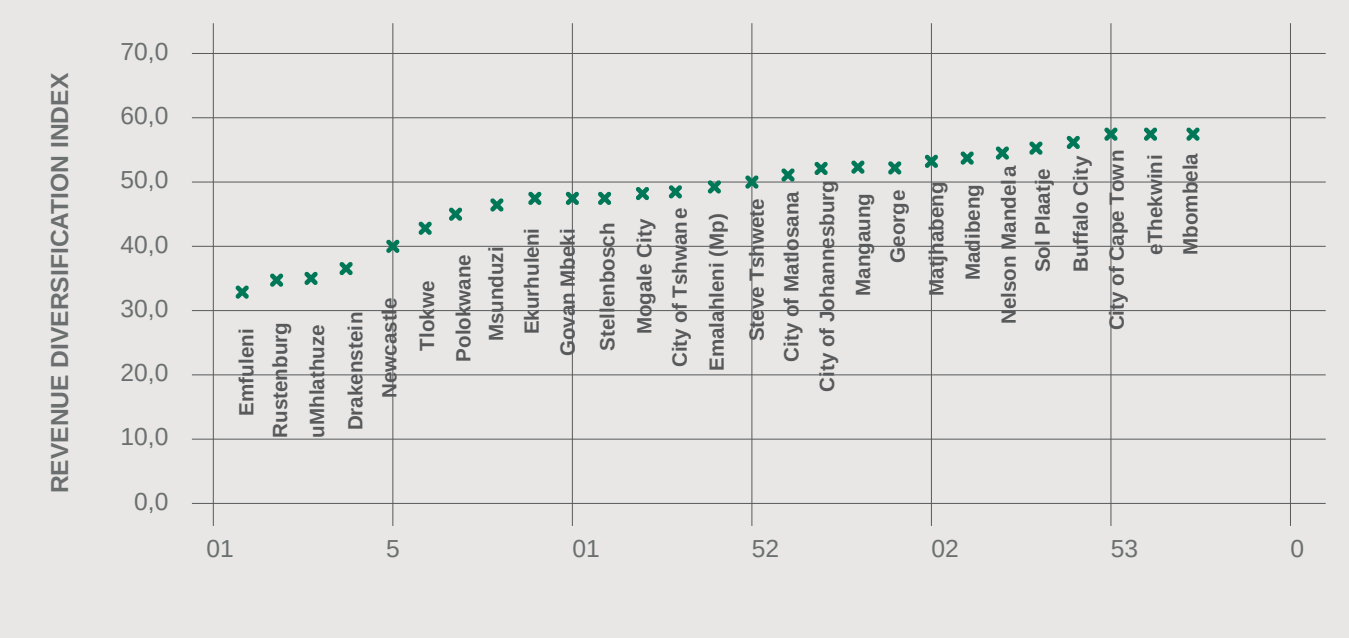
11.3.1 Revenue diversification among large cities

Revenue diversity is a key local government policy issue with many benefits, for example, it reduces the risk or variability associated with relying on a single revenue source, helps achieve significant debt capacity, and it enhances the financial health and sustainability of a municipality (Shannon, 1987).

The results of the Hirschman-Herfindahl Index are presented in Figure 44. The average diversification index for large cities is 48, with Emfuleni, Rustenburg and uMhlathuze being the least revenue diversified while Mbombela, eThekwini and City of Cape Town are the most diversified. What is evident from Figure 44 is that many large cities need to diversify revenue structures as they all fall within the low to moderate range. The following sections discuss alternative revenue sources for large cities.

36 ince we expected some degree of correlation between some of the observations, the GLS estimation technique was adopted in order to make the estimates more efficient.

Figure 44. Revenue diversification index



Source: Commission's calculations.

11.3.2 Financing large cities: An analysis of alternative revenue raising instruments

As noted before, evidence suggests that this capital funding gap for large cities in particular can be closed by leveraging alternative revenue sources. The purpose of this section is to evaluate alternative revenue sources for large cities. The mechanisms that are subject to this evaluation include:

- The local government debt market and borrowing
- Pooled Financing Mechanisms (PFMs)
- Public-private partnerships (PPPs)

11.3.3 Borrowing constraints faced by large cities

Given the size of their economies and revenue bases, large cities have the potential to leverage on borrowing. However, borrowing by any municipality, no matter how large or small, should be approached with caution as it has many unintended consequences. It is important that responsible and regulated access to capital markets is allowed only to credit-worthy municipalities.

In theory borrowing finance is in two forms. The first is through the issuing of municipal government bonds and the second is borrowing from financial institutions that lend to municipalities. From a theoretical point of view, borrowing fills the funding gap for large infrastructure projects that are important for economic growth. With these benefits, the question then is why are large cities in South Africa not fully exploiting this revenue window to augment other revenue sources? Results from the GLS random effects model estimated that the size of the population variable is significantly related to the borrowing capacity of a municipality. A larger population signifies larger infrastructure demands and thus larger financial needs. Similarly, a municipality with higher per capita income is more likely to borrow to meet higher demands for public goods than one without. Higher per capita incomes also mean a sound revenue base. Municipalities with a sound revenue base are more likely to participate in the credit market than those with weak bases. The equitable share allocation seems to discourage borrowing. A 1% increase in the equitable share reduces borrowing by 1.3% for large cities. This is not surprising as it has long been suspected that dependency on transfers by large cities may actually discourage large cities from playing a significant part in the credit market. To encourage large cities to borrow, it may be necessary to link the borrowing framework for large cities with the transfer framework whereby large cities are able to use grant funding to leverage private capital. Finally, the results show that a municipality with a good borrowing track record is more likely to borrow. A good track record implies a sound credit rating. Thus, credit ratings should be encouraged among municipalities as they would enhance the ability of large cities to access loans. The cost of credit (the lending rate) is a constraint to borrowing, but a less significant one.

Having noted the key drivers of borrowing, the next section looks at how access to capital markets by large cities can be enhanced, including through PFMs and PPPs.

11.3.4. Enhancing access to capital markets for large cities

International literature abounds with cases of successful local government debt markets. Success factors for debt markets include the adequacy of information on the credit status of municipalities, reputational history, creditworthiness and the existence of credible institutional structures that will ensure that there are timely responses to market signals (Lane 1993). In addition, there are other measures that can be initiated to enhance borrowing by large cities including linking borrowing and transfer frameworks; improving credit ratings; PFMs; and PPPs.

11.3.4.1 Linking borrowing and transfer frameworks for large cities

The principle of differentiation has long guided the conceptualisation of the local government fiscal framework. Municipalities have different fiscal capacities and their infrastructure needs are diverse. Given their different needs and fiscal capacities, municipalities should ideally be treated differently in the allocation of scarce national resources. Taking the principle of differentiation a step further, it can be argued that large cities require less conditions on their grants. Conditions on grants should be relaxed for large cities as they have relatively better capacity to manage grant funds and implement large and small capital projects. Thus, the borrowing framework for large cities should be linked to the transfer framework whereby large cities can use their infrastructure grant funding to leverage private capital.

11.3.4.2 Credit rating and creditworthiness of municipalities

The creditworthiness of municipalities is a key factor in their participation in credit markets (Bajo and Primorac, 2010). Credit ratings are a crucial factor for gauging the creditworthiness of municipalities. Credit ratings for local government can assist in the detection of failures or omissions in managing certain operational segments of municipalities. When credit ratings are available to the wider public, they help promote good local governance, while warning those that underperform and motivating them to correct failures. In a way, credit ratings enhance positive competitiveness among municipal units thereby enhancing their access to credit markets.

Presently, few municipalities have credit ratings of any sort. Credit ratings have come from international rating agencies and Moody's and Fitch in particular. Locally INCA[37], a private financier had its own sophisticated internal local government credit rating which was regularly overseen by Fitch. INCA's credit rating system, which was mainly applied to metros, was widely seen as the cornerstone of the company's success, as it enabled the company to keep municipal default rates to a bare minimum. It used the credit ratings to detect risky municipalities and make timely interventions where necessary. INCA stopped its lending to municipalities and its credit rating system due to declining profit margins resulting from stiff competition from the public sector (Mahabir and Mabena, 2014). In order to enhance a local government credit market it is important that a municipal credit rating system is established with one of the local development finance institutions championing this process. Considering its long history in the municipal credit market, the Development Bank of Southern Africa (DBSA) is probably the most appropriate institution to establish a credit rating system for municipalities.

11.3.5 A case for establishing a pooled financing mechanism for secondary cities

PFMs have of late gained much traction as a funding source for infrastructure projects in both developed (e.g. United States of America, France, Sweden and Denmark) and developing countries (including Mexico and India). These countries have used PFMs to mobilise funding for, among other services, water, sanitation, energy, transport and telecommunications infrastructure. The PFMs involve municipalities that share a similar vision and credit characteristics coming together to access public sector funding, issue bonds or simply access bank finance. Acting alone municipalities cannot access such funding streams because they lack the financial capacity and scale, expertise and creditworthiness.

37 Infrastructure Finance Corporation Limited, trading as INCA, was established in 1996 as a response to the South African government's call for increased private sector involvement in infrastructure funding.

PFMs around the world have taken many forms and shapes, ranging from basic voluntary associations to very complex ones characterised by independent special purpose vehicles as found in many developed countries. The question arises whether the PFM is a viable option for South African large cities? To address this, well known criteria in public finance for evaluating the usefulness and effectiveness of other revenue instruments is used (see Table 37).

Table 37. Assessing applicability of the PFM for large cities

Principle	Assessment	Comment
Efficiency	Good	• PFMs minimise transaction costs through economies of scale, and lower debt service costs. • Municipalities are insulated from the liabilities of PFMs as they are independent legal entities. • PFMs and bond issuance assists in enforcing market discipline and ensures that market participants subscribe to efficiency and good governance.
Clear objectives	Good	• Since funding will be project specific, objectives should be clear.
Fairness	Good	• Revenues that municipalities source through PFMs will always vary with their fiscal need, and will force a municipality to resort to unduly high taxes to pay their debts, as the transaction costs associated with the debt are lower as well as debt servicing costs.
Accountability	Good	• The local authorities will be accountable to the community on the use of funds, while PFMs are accountable to shareholders (i.e. participating municipalities).
Transparency	Good	• Shareholders, i.e. municipalities will ensure transparency through monitoring and auditing the activities of PFMs.
Predictability	Satisfactory	• No guarantee of revenues as it depends on the applicant's circumstances. But with the technical assistance that PFMs should provide to participating municipalities, the revenues should be predictable and a municipality could plan for its future expenditures.
Revenue adequacy	Good	• As per a municipality's specified needs and projects, revenues will be adequate.
Autonomy	Good	• Municipalities will have autonomy on the sourcing and use of funds.
Responsiveness	Good	• Funding will be responsive to the needs of municipalities provided they meet set criteria.
Simplicity	Satisfactory	• Depending on the PFM form, it can be simple.

Source: Commission's assessment.

The above assessment shows that PFMs satisfy all the principles that define a good revenue option and thus could be considered as a viable revenue option for large cities. With the assistance of DBSA, large cities should explore PFMs.

11.3.6 Public-Private Partnerships

Another mechanism for local government to access private funding is the PPP channel. There is no standard definition of PPPs. For the purposes of this paper, PPPs are defined as simple contractual arrangements between a municipality entity and a private entity with the aim of providing a public good or asset whereby the private entity assumes significant risk as well as management and operational responsibilities. Standard and Poor define PPPs as "any medium to long-term relationship between the public and private sectors, involving the sharing of risks and rewards of multisector skills, expertise and finance to deliver desired policy outcomes." The latter definition highlights many key attributes of PPPs. PPPs allow a public entity to leverage private capital to fund infrastructure. Besides injecting private capital, and sharing risks, PPPs also allow public entities to access private sector expertise and skills especially in the areas of project planning, finance and project management. With PPPs, public goods are delivered according to private sector standards and efficiencies. PPPs tend to stimulate innovative project design, encourage accountability and promote value for money.

PPPs are not new to South Africa. The setting up of municipal PPPs is regulated under the Municipal Finance Management Act of 2003 and the Municipal Systems Act of 2003. A PPP unit was established at National Treasury in 2000 to guide the

operations of PPPs. As of March 2013, there were 27 active PPPs in the municipal space. Presently PPPs are found in a number of sectors, including transport, roads, healthcare, eco-tourism, office accommodation, and social development sectors. Although large cities are well placed to benefit from PPPs, given their large infrastructure requirements and high backlogs and rehabilitation needs, many have not exploited the PPP approach. The constraints to widespread adoption of PPPs include:[38]

- The process towards having a PPP deal approved is cumbersome as projects are required to undertake a rigorous feasibility assessment before an even more rigorous procurement process. Although the centralised approval process guarantees good quality deals, it makes the turnaround time for PPP deals long, expensive and time consuming. The challenge is that all projects, whether the total value is small (R5 million) or big (R100 million) are subjected to a similar rigorous feasibility exercise. PPP deal flows can be expedited by subjecting only high value (above R100 million) and complex projects to a rigorous feasibility exercise, and projects with a value of less than R100 million to a less rigorous assessment process. It may also be necessary for the PPP unit to standardise PPP contracts. For instance, all waste management contracts could have a standard contracting arrangement which municipalities can then customise.
- High costs associated with feasibility studies have either delayed or deterred many PPP deals. Feasibility studies are, by their nature, very expensive. Government incentives in this area could be one way of improving PPP uptake. One incentive that government could adopt would be to allow part of the Municipal Infrastructure Grant to finance feasibility studies or establish a national grant facility to finance feasibility studies.
- Another constraint to PPP deal flow in the local sphere is that infrastructure projects serving the poor are often not bankable because user fees from the poor "are not sufficient to cover the payment to the private sector" (National Treasury PPP Unit, 2007). To deal with this challenge, municipalities should be allowed to leverage on MIG funding. The reasonable approach is to use MIG to fund the portion of the capital project that would benefit poor households and private funding to cater for non-poor households. The private sector funding will then be paid from user fees and own revenues. Leveraging Municipal Infrastructure Grant funds would lower finance costs. It would also cater for small to medium sized projects that often characterise secondary cities. It has to be pointed out that cases where municipalities leverage on public grants in partnership deals are not uncommon. National Treasury's PPP unit (2007) notes that the successes of PPPs in the United Kingdom hinges largely on local authorities leveraging on public grant finance. Similarly, India has used capital grants (so called viability gap funding) to incentivise PPPs. Other countries that have seen the widespread use of municipal infrastructure grants to incentivise PPPs include water projects in Chile and Paraguay, roads projects in Argentina, primary health care in Romania and oral dehydration in Bangladesh (National Treasury PPP Unit, 2007, World Bank, 2005).
- Another stumbling block to the formation of PPPs is that many municipalities have poor debtor books and are perceived to be a credit risk when they approach financial institutions for PPP funding. The PPP uptake can be improved if municipalities' participation in credit markets is enhanced.
- The limited capacity to originate, implement and manage PPPs within municipalities is another stumbling block (Jooste and Scott, 2011, Jooste and Scott, 2012). PPPs require specialised skills in project development, procurement, negotiating and overseeing PPPs, which do not exist in many municipalities. This skills shortage does not only limit the number of PPP deals, but weighs the deals in favour of the private partner. Discussions with the PPP unit also indicate that the unit is spreading itself thinly. As of April 2017, the unit had about 13 professional staff dealing with all PPP related matters within a broad range of sectors and within all national and provincial departments, state-owned entities and 257 municipalities.
- Although the PPP unit at National Treasury is doing well in regulating PPPs, it lacks resources to promote them and build capacity within municipalities to originate, implement and manage PPPs.
- PPP uptake is also partly constrained by the relevant legislation. Municipal outsourcing, including PPPs resides in two pieces of legislation: the Municipal Systems Act and the Municipal Finance Management Act (MFMA) as well as the Municipal Supply Chain Management Regulations. These two acts reside in different government departments (i.e. COGTA is responsible for Municipal Systems Act and National Treasury for the MFMA). The two acts (Section 78 of the Municipal Systems Act and Section 120 of the MFMA) require feasibility studies to be undertaken before a municipality proceeds with a PPP. The major challenge is that the process of trying to satisfy the requirements of the two pieces of legislation is long and arduous, and full of duplication. There is room to amend the legislation with respect to feasibility studies. As discussed above, a threshold of R100 million could be used to distinguish high value and low value projects for secondary cities and metros when applying different criteria to feasibility requirements.
- Finally, PPPs are viewed with suspicion by some municipal communities. There is political mistrust of PPPs as municipalities view private sector participation as a form of privatisation of state assets. On the other hand, the private sector sees municipalities as striving to shift most of the risk to them. Trade unions also consider private sector involvement in the provision of public infrastructure services a threat to jobs and incomes.

38 This information is based on our discussions with the PPP Unit at National Treasury.

The discussion on PPPs confirms a number of things. First, PPPs provide a key approach to building a sound infrastructure base among large cities. Second, there is a need to improve the PPP deal flow among municipalities through, among other things, increasing the quantum of specialised skills in project development, procurement, negotiating and overseeing PPPs; streamlining the PPP approval process and injecting more resources into initiatives that promote PPPs.

11.3.7 Land value capture mechanisms

Evidence from a number of countries (both developing and developed) shows that value capture mechanisms are a major source of revenue for local governments. Apart from development charges, the South African local government sector has not exploited land value capture to a large degree. Land value capture mechanisms have potential in the South African local government system because local authorities and other spheres of government invest significant amounts of public resources in infrastructure. In this regard, it is reasonable for the public to share the benefits of infrastructure induced 'unearned incomes'. Infrastructure spend in the local government sector has increased phenomenally from almost R3 billion in 2000 to over R41 billion in 2016/17. By and large, such infrastructure investment should have generated value for property owners. The argument is that the wealth created by private land owners, without them taking any risks, should be the subject of appropriate recapture by local authorities.

To evaluate the appropriateness of land value capture mechanisms in the context of South African large cities, this section evaluates betterment levies, benefited areas rates, and leveraging municipal land based on the following criteria in Table 38: applicability, economic efficiency, equity, extent of barriers to implementation, revenue reliability and revenue yield.

Table 38. Land value capture mechanisms evaluation

Land Value Capture Mechanisms Evaluation				
Criteria	Explanation	Betterment levies (fees charged for additional development rights equivalent to upliftment value)	Benefited areas rates (value-related levies in benefiting areas)	Leveraging municipal land (leasing land, joint ventures)
Applicability:	Given current legislation is the mechanism applicable?	Depending on how the value capture mechanism is defined (e.g. surcharge, fees, tariffs, taxes or property rates) their implementation would be governed by different legislation (e.g. MFMA, Property Rates Act, etc.) and that legislation can easily be modified to accommodate this mechanism		
Economic efficiency	Mechanism does not distort land, property and labour markets	Captures unearned value uplift if well designed, and non-distortionary if appropriately designed	Captures unearned value uplift if well designed, and non-distortionary if appropriately designed	All methods for leveraging municipal land are efficient
Equity	People in similar circumstances are treated equally and costs are borne by those who benefit	Geographically equitable	Geographically equitable for 'special rates' for benefited areas and less equitable if similar rates are applicable to whole municipal area	Good
Extent of barriers to implementation	Mechanism will be acceptable by stakeholders and can easily be incorporated within the current gambit of fiscal instruments	The challenge is to design a system that reflects uplift value, which also does not deter development	Difficult to design and determine beneficiaries	Limited to availability of land
Revenue reliability	Revenue source is stable and predictable	Potential to generated steady flow of revenue	Stable and reliable source of revenue only if it can be apportioned properly to beneficiaries	If well designed leases/ joint ventures/sale of advertising concessions provide steady flow of revenues
Revenue yield	Revenue source is worthwhile given the costs of collection and expenditure requirements	Potential to generate substantial revenues, but can be dependent on market conditions	Potential to generate substantial revenues, but can be dependent on market conditions	Good if well designed

Source: Commission's assessment.

The above evaluation shows that land value capture mechanisms can be a viable revenue source for large cities. As there are different mechanisms, their success depends mainly on municipal contextual factors. If well designed, land value capture mechanisms can be a reliable and sustainable revenue source for many large cities. Besides being efficient and equitable, they have the potential to also generate substantial large revenues from municipal land. As noted in literature, the successful implementation of any land value capture mechanism depends largely on political will and public involvement in the proper design of the levy, a clear legal framework, effective land use management systems, well trained and capacitated persons charged with its implementation and an efficient, accurate and timely land valuation process that accurately identifies changes in land values.

11.4 Summary and Recommendations

Large cities face many challenges, including rapid urbanisation, poverty, inequality, unemployment, and huge infrastructure needs. Although these challenges are not unique to large cities, the magnitude of the challenges in large cities is greater and increasingly becoming a major risk to the growth and development of the country. The ability of cities to deal with these challenges depends, to a large extent, on their ability to generate more own revenues. Evidence suggests that there is a large capital funding gap for large cities and traditional own revenue and transfers cannot close this funding gap. Thus, large cities need to leverage on non-traditional and innovative financing mechanisms to close the capital funding gap. Findings from this chapter suggests that large cities should diversify and adopt new and innovative financing instruments, which include measures to enhance borrowing, land value capture mechanisms and measures to enhance public-private partnership deals among municipalities.

With respect to own revenue diversification and financing models for urban municipalities, the Commission recommends that:

1. National Treasury improves access to credit markets for large cities by:
   a) Allowing them to use their infrastructure grant funding allocations to leverage private capital.
   b) Establishing a credit rating mechanism for municipalities with the Development Bank of Southern Africa as the most suitable public entity to lead the establishment of this.
   c) Requesting the Development Bank of Southern Africa to facilitate the creation of a special purpose vehicle to facilitate the pooling of financial resources by large cities for the purpose of joint bond issuance and lending to large cities.
2. The Public Private Partnership Unit at National Treasury improves the public-private partnership deal flows within municipalities by:
   a) Streamlining the PPP approval process by subjecting only high value (above R100 million) and complex projects to rigorous feasibility studies.
   b) Using the Financial Management Grant to build capacity within large cities in specialised skills in public-private partnership development, procurement, negotiating and monitoring.
   c) Incentivising public-private partnerships through adopting a national facility for financing feasibility studies in municipalities.
3. National Treasury creates awareness of land value capture fiscal instruments among large cities and extends the scope of the Financial Management Grant to cater for capacity building in the design and implementation of land value capture mechanisms.

References

References for Chapter 1

Financial and Fiscal Commission. 2011. Submission for the 2011/12 Division of Revenue. Johannesburg: Financial and Fiscal Commission (FFC).
Mabugu, R, 2017. "The Impact of the Financial Crisis on Intergovernmental Financial Relations in South Africa", Chapter 13 in Ecclestone, PJH., and Krever, R., (eds) , The Future of Federalism: Intergovernmental Financial Relations in an Age of Austerity, Edward Elgar Publishing Ltd; UK. Pp314-342. February
NPC (National Planning Commission). 2011. National Development Plan: Vision for 2030. Available: www.npconline.co.za.
Stats SA (Statistics South Africa). 2011. Income and Expenditure Survey 2011. Available: www.statssa.goc.za.
Stats SA. 2014a. Contributing Sector Tables for Supply Use: 2002–2014. Available: www.statssa.goc.za.
Stats SA. 2014. Poverty Trends in South Africa: An examination of absolute poverty between 2006 and 2011. Report No. 03-10-06. Pretoria: Stats SA.
Stats SA. 2013. Quarterly Labour Force Surveys: Raw Data. Available: www.statssa.goc.za.
Stats SA. 2016. Quarterly Labour Force Surveys: Raw Data. Available: www.statssa.goc.za.
Vacchiani-Marcuzzo, C. 2005. Mondialisation et Système de Villes (unpublished PhD thesis). Paris: University of Paris.

References for Chapter 2

COGTA (Cooperative Governance and Traditional Affairs). 2016. Integrated Urban Development Framework. Pretoria: COGTA.
Mahajan S. (ed.). 2014. Economics of South African Townships: Special Focus on Diepsloot. World Bank Studies. Washington, DC: World Bank.
Mamouney, L and Coffey B (2015), 'Research methods in Australian policy research a critical analysis', in Proceedings of the Australian Political Studies Association Annual Conference 2015, Canberra, Australia, 28-30 September 2015, pp. 1-21.
Mergaert L and Minto R (2015) Ex Ante and Ex Post Evaluations: Two Sides of the Same Coin? The Case of Gender Mainstreaming in EU Research Policy Symposium on Policy Evaluation in the EU, EJRR No1
NPC (National Planning Commission). 2011. National Development Plan Vision 2030. http://www.poa.gov.za/news/Documents/NPC%20National%20Development%20Plan%20Vision%202030%20-lo-res.pdf.
Sitas R. 2016. City Support Programme. Available at http://www.mistraurbanfutures.org/en/city-support-programme (Accessed 14 September 2016)
Turok I and Parnell S. 2009. Reshaping cities, rebuilding nations: the role of national urban policies, Urban Forum, 20: 157-174.

References for Chapter 3

Financial and Fiscal Commission. 2011. Submission for the 2011/12 Division of Revenue. Johannesburg: Financial and Fiscal Commission (FFC).
Heidrich, O., Dawson, R. J., Reckien, D., Walsh, C.L., 2013. Assessment of the climate preparedness of 30 urban areas in the UK. Climate Change 120, pp. 771 - 784.
National Planning Commission. 2011. National Development Plan: Vision for 2030. National Planning Commission.

References for Chapter 4

Borrego, C., Martins, H., Tchepel, O., Salmim, L., Monteiro, A.,Miranda, A. I. (2006). "How urban structure can affect city sustainability from an air quality perspective." Environmental modelling & software 21(4): 461-467.
Bureau for Economic Research. 2003. The Feasibility of a Fuel Tax Levy in the Western Cape.
City of Cape Town. 2014. Development Charges Policy for Engineering Services for the City of Cape Town. Available at: http://www.tct.gov.za/docs/categories/1276/DevelopmentChargesPolicy_2.pdf
City of Cape Town. 2015. MyCiTi Business Plan 2015 Update: Phase 1 and N2 Express. Available at https://myciti.org.za/docs/2549/MyCiTi%20Business%20Plan%202015%20Update.pdf

FFC (Financial and Fiscal Commission). 2014. Submission for the 2015/16 Division of Revenue. Midrand: FFC. Available at: https://www. ffc.co.za
FFC (Financial and Fiscal Commission). 2010. Submission for the 2011/12 Division of Revenue. Midrand: FFC. Available at: http://www.ffc.co.za
GIZ and National Treasury (2016). Public Transport Assignment Study. Assessing and catalysing demand for city management of the public transport function. Unpublished report.
IBM. 2006. The Stockholm Congestion Charging Trail.
Available at: http://www.stockholmsforsoket.se/upload/Infomaterial%20MAK/IMPACTS_IBM_v2.pdf
Litman, T. 2011. London Congestion Pricing: Implications for Other Cities. Available at: http://vtpi.org/london.pdf
National Department of Transport. 1996. White Paper on National Transport Policy. Pretoria: Department of Transport.
National Department of Transport. 2007. Public Transport Strategy. Pretoria: Department of Transport.
National Department of Transport. 2012. Business Case for an Investment Programme into Road--Based Transport. Pretoria: Department of Transport.
National Department of Transport. 2015. National Land Transport Strategic Framework. Pretoria: Department of Transport.
National Department of Transport. 2017. Draft Revised White Paper on National Transport Policy. Pretoria: Department of Transport.
National Treasury and Cities Support Programme. 2016. IPTN Reviews – Status Quo Report: Benchmarking, Reporting and Fiscal Sustainability Guidelines for IPTNs.
National Treasury. 2017. Division of Revenue Bill. Available at: http://www.treasury.gov.za/legislation/bills/2017/b%204-2017%20(division%20of%20revenue).pdf
National Treasury. 2017. Budget Review. Available at: http://www.treasury.gov.za/documents/national%20budget/2017/review/FullBR.pdf
Nottingham City Council. 2017. Workplace Parking Levy. Available at: http://www.nottinghamcity.gov.uk/transport-parking-and-streets/parking-and-permits/workplace-parking-levy/
Pflieger, G, Vincent Kaufmann, V, Luca Pattaroni, L and Christophe Jemelin, C. 2009. How Does Urban Public TransportChange Cities? Correlations betweenPast and Present Transport and Urban Planning Policies. Urban Studies. Vol 46(7): 1421–1437.
SACN (South African Cities Network). 2015. State of city finances: Basics and innovation. Johannesburg, South Africa.
SEPTA. 2016. Capital and Operating Budgets. Available at: http://septa.org/strategic-plan/reports.html
South Africa. 2009. National Land Transport Act (No.5 of 2009). Pretoria: Government Printers
Statistics South Africa (2013). Household Travel Survey 2013. Access: www.statssa.co.za
Statistics South Africa (2013). Measuring Household Expenditure on Public Transport. Access: www.statssa.co.za
Translink. 2017. Annual Report: 2015. Available at: https://view.publitas.com/translink/translink-2015-annual-report/page/24
Transport for London. 2017. Annual Report and Statement of Accounts 2015/16. Available at: http://content.tfl.gov.uk/tfl-annual-report-2015-16.pdf.
United Nations Human Settlement Pattern (UN-Habitat). 2013. Planning and design for sustainable urban mobility: global report on human settlements. New York. Routledge.
Walters, J. 2014. Public Transport Policy Implementation in South Africa. Quo Vadis? Journal of Transport and Supply Chain Management 8(1): 1 – 10.
Rode, P., Floater, G., Thomopoulos, N., Docherty, J., Schwinger, P., Mahendra, A., and Fang, W. (2014): Accessibility in Cities: Transport and Urban Form. NCE Cities Paper 03. LSE Cities. London School of Economics and Political Science.

References for Chapter 5

Centre for Affordable Housing Finance in Africa (2009). GAP Housing: The next property boom. Available online: http:// http://housingfinanceafrica.org/app/uploads/IHS-conference-input_FinMark.pdf
Centre for Affordable Housing Finance in Africa (2015). South Africa's Residential Property Market. Available online: http://www.housingfinanceafrica.org/wp-content/uploads/2016/02/The-South-African-Housing-Market-Overview-2015.pdf
Gauteng Observatory Quality of Life Survey, 2015. Livelihoods and poverty.
Available online: http://www.gcro.ac.za/media/redactor_files/QoL%20Brief_2_Livelihoods%20and%20poverty.pdf
Social Housing Regulatory Authority, 2016. 2016 Annual Report. Available online: http://www.shra.org.za/images/PDFs/SHRA-Annual-Report-2015-16.pdf

Statistics South Africa, 2012. Census 2011, Statistics South Africa, Pretoria, South AfricaTrading Economics. South Africa households' debt to GDP http://www.tradingeconomics.com/south-africa/households-debt-to-gdp

References for Chapter 6

Cowley, V. Knightley, R. and Moya, B. 2011. From Farm Schools to Hostel Schools: A lived Reality. Centre for Applied Legal Studies. University of Witwatersrand
De Kadt, J. 2011. Measuring the extent of learner mobility in contemporary urban Johannesburg-Soweto, South Africa, Unpublished thesis submitted for the degree of Doctor of Philosophy. University of Witwatersrand: Johannesburg
Du Plessis, A. 2014. Voices of Despair: Challenges for Multi-grade teachers in a Rural District in South Africa.
Fiske, E.B. and Ladd, H.F. 2006 Racial equity in education: How far has South Africa come? Perspectives in Education, Vol. 24, no. 2, pp. 95-108
Gustafsson, M. 2016. Teacher Supply and the Quality of Schooling in South Africa, Patterns Over Time and Space, Stellenbosch Economic Working Paper: 03/16, University of Stellenbosch, Bureau for Economic Research.
Lombard, B. 2009. Reasons why educator-parents based at township schools transfer their own children from township to former Model C schools. Education as change. Vol. 11 no. 1, pp. 43-57.
Marais, 2016. We can't believe what we see: Overcrowded classrooms through the eyes of the student.
Msila, V. 2005. The education exodus: The flight from township schools. African Education Review. Vol. 2, no.2, pp. 173-188.
Neluvhola, G. T. 2007. Education management implications of learner migration amongst selected Secondary Schools in Limpopo province, a dissertation submitted for the Degree of Masters of Education. University of South Africa, Pretoria.
Sayed, Y. 2008. Education Decentralisation in South Africa: Equity and Participation in the Governance of School. Background paper prepared for the Education for All Global Monitoring Report. UNESCO
Simelane, I.C. 2014. Learner migration and its impact on rural schools: A Case Study of Two Rural Schools in KwaZulu-Natal. Dissertation Submitted in fulfilment of Masters of Education. University of KwaZulu-Natal
Statistics South Africa, 2016. Community Survey, Statistics South Africa, Pretoria, South Africa
Torre, M. & Gwynne, J. 2009. A look at student mobility trends in Chicago public schools since 1995. (Consortium on Chicago school research] No. [Illinois 60637]).
Van der Merwe, H. 2011. Migration patterns in rural schools in South Africa: Moving away from poor quality. Education as Change, Vol. 15, no. 1, pp. 107-120.

References for Chapter 7

Brown, L and Greenbaum, R. (2016). The role of industrial diversity in economic resilience: An empirical examination across 35 years. Urban Studies Published online before print and available at: http://usj.sagepub.com /content/early/2016/01/19/0042098015624870.abstract
Centre for Development Enterprise [CDE] (2016). The CDE Growth Agenda Series, Burnstein, A. (Ed). Growth Series Report 4.
Drennan M. (2002). The Information Economy and American Cities. Baltimore, MD: JHU Press
Fu, S and Dong, X and Chai, G. (2010). Industry specialization, diversification, churning, and unemployment in Chinese cities. China Economic Review 21: 508-520.
Izraeli O and Murphy K. (2003). The effect of industrial diversity on state unemployment rate and per capita income. Annals of Regional Science 37(1): 1–14.
Koma, S. (2014). The Implementation of Local Economic Development Policy: The Case of Emakhazeni Local Municipality in South Africa. Administratio Publica 22(4): 40 – 61.
Lawrence, F and Hadingham, T. (2008). Decentralisation and the challenge of institutionalizing local economic development: Some practical insights from the South African experience. @local. glob 5. Delnet Program International Labor Organisation: Turin.
National Treasury (2011). 2011 Local Government Budgets and Expenditure Review: 2006/07–2012/13. Available at: http://www.treasury.gov.za/publications/igfr/2011/lg/02.%202011%LGBER%20-%20Final%20-%20 13%Sept%202011%20(renumbered).pdf
Nourse, H. (1968). Regional Economics. New York: McGraw-Hill.
NPC (National Planning Commission). 2011. National Development Plan: Vision for 2030. Available: www.npconline.co.za.
Porter M. (1990). The Competitive Advantage of Nations. New York: Free Press
Reddy, P.S. (2016). From National to Local Economic Development (LED): The South African Case. In Schoburgh, E.D.,

Martin, J. and Gatchair, S. (Eds) Developmental Local Governance: A Critical Discourse in Alternative Development'. 86-106. Palgrave Macmillan, United Kingdom.
Richardson, H. W. (1969). Regional Economics. Praeger, New York.
Sienkiewicz, M.W. (2014). Municipal Development Strategy as an Instrument of Local Economic Development Policy. Socialiniai tyrimai/ Social Research 3 (36): 13-15.
Storper M and Manville M (2006) Behaviour, preferences and cities: Urban theory and urban resurgence. Urban Studies 43(8): 1247–1274
Turok, I. (2012). Urbanization and Development in South Africa: Economic Imperatives, Spatial Distortions and Strategic Responses. International Institute for Environment and Development, United Nations Population Fund. Urbanization and Emerging Population Issues Working Paper No. 8. October 2012. Available at: http://pubs.iied.org/10621IIED.html
Turok, I. (2010). Towards a Developmental State? Provincial economic policies in South Africa. Development Southern Africa 27(4): 497–515.

References for Chapter 8

Fourie, F. 2013. The NDP on unemployment: On consistency, coherence and comprehensiveness. [Online]. Available at: http://www.essa2013.org.za/fullpaper/essa2013_2766.pdf
Global Insight, Regional Explorer. 2016. Global Economic Data. IHS International.
International Labour Organisation (ILO). 2015. World Employment Social Outlook. [Online]. Available: http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_337069.pdf
National Planning Commission. 2011. National Development Plan: Vision for 2030.
White Paper on Local Government, 1998, Department of Constitutional Development, CTP Book Printers, Pretoria. [Online]. Available at: http://www.cogta.gov.za/cgta_2016/wp-content/uploads/2016/06/whitepaper_on_Local-Gov_1998.pdf
Wooldridge, J.M., 2009. Introductory Econometrics: A modern approach. Canada: South-Western Cengage Learning.

References for Chapter 9

Burger, P. and Fourie, FCvN. (forthcoming 2018). The informal sector, economic growth and the business cycle. In FCvN Fourie & C. Skinner (editors). Tackling unemployment and poverty in South Africa: The contribution of the informal sector (provisional title).
Charman, A. Pieper, L. and Petersen, L. 2012. Informality disallowed: state restrictions on informal traders and micro-enterprises. Available from www.carnegie3.org.za/../54_Charman_informality%20disallowed%20. [20 July 2015]
Chen, M. A. 2012. The Informal Economy: Definitions, Theories and Policies. WIEGO Working Paper No 1. Women in Informal Employment: Globalising and Organising. Manchester
Chen, M.A. 2005. Rethinking the informal economy: Linkages with the formal economy and the formal regulatory environment (No. 2005/10). Research Paper, UNU-WIDER, United Nations University (UNU).
Cox, K.R., Hemson, D. and Toddes, A. 2004. Urbanisation in South Africa and the Changing Character of Migrant Labour, South African Geographical Journal, 86:1, pp. 7 – 16
Department of Small Business Development, 2015, National Informal Business Upliftment Strategy. Department of Small Business Development, Pretoria South Africa.
Elgin, C and Oyvat, C. 2013. Lurking the cities: Urbanisation and Informal Economy, Structural Change and Economic Dynamics, 27 (2013), pp. 36 - 47
Fourie, F. 2013. The NDP on unemployment: On Consistency, Coherence and Comprehensiveness. Paper Presented at ESSA conference, Bloemfontein, September, 2013. Available at: http://www.essa2013.org.za/fullpaper/essa2013_2766.pdf
Gauteng Economic Development Department, 2014. Gauteng Township Economic Revitalisation Strategy. Gauteng Economic Development Department, Johannesburg, South Africa
Ghani, E. and Kanbur, R. 2012. Urbanisation and Informality. World Bank
Grabrucker, K, Grimm, M and Rouband, F. (Forthcoming 2016). The Informal Economy in Sub-Saharan Africa: A comparative perspective. Tackling unemployment and poverty in South Africa: The contribution of the informal sector (provisional title).
International Labour Organization (ILO). 2002. Women and Men in the Informal Economy: A Statistical Picture. Geneva: ILO.
National Planning Commission (NPC) 2011. National Development Plan. National Planning Commission,
Pretoria, South Africa
Philip, K. 2010. Inequality And Economic Marginalisation: How The Structure Of The Economy Impacts On Opportunities On The Margins. Law, Democracy & Development Vol.14.
Rogan, M and Skinner, C. 2016.Employment in the South African Informal Sector: Interrogating Trends; Identifying Opportunities. Tackling unemployment and poverty in South Africa: The contribution of the informal sector (provisional title).
Sparks, D.L and Barnett, S.T. 2010. The Informal Sector in Sub-Saharan Africa: Out of the Shadows to Foster Sustainable

Employment and Equity. International Business and Economic Research Journal, vol. 9, no. 5. Available from http:// datapro.fiu.edu/campusedge/files/articles/barnetts3107.pdf. [6 June 2015]
Statistics South Africa. 2016. Quarterly Labour Force Survey. Statistics South Africa, Pretoria
Statistics South Africa. 2013. Survey of Employers and the Self Employed. Statistics South Africa, Pretoria
Turok, I. 2012. Urbanisation and development in South Africa: Economic Imperatives, Spatial Distortions and Strategic Responses. Urbanisation and Emerging Population Issues working Paper 8. International Institute for Environment and Development, United Nations Populations Fund
Valodia, I. 2012. Bringing the Informal Economy into the National Development Plan, Social Dynamics, 39: 1, pp. 115 – 118
Venek, J, M. Chen, and R. Hussmanns. 2013. "Statistics on the Informal Economy: Definitions, Findings, and Challenges." WIEGO Working Paper No 2. Cambridge, MA, USA: WIEGO.Add following references in your text but missing here

References for Chapter 10

BMI-T (BMI-TechKnowledge). 2015. SA ICT spend in national and provincial government. Available: http://www.bmi-t.co.za/content/sa-ict-spend-national-and-provincial-government.
FFC. 2011. Annual Submission for the Division of Revenue [Online]. Available at: www.ffc.co.za
National Treasury. 2016. Division of Revenue Bill. [Online]. Available: www.treasury.gov.za
National Treasury. 2014. Local Government Database. [Online]. Available at; www.treasury.gov.za
OECD. 2015. OECD Digital Economy: 2015. [Online]. Available at: http://www.keepeek.com/Digital-Asset-Management/oecd/science-and-technology/oecd-digital-economy-outlook-2015/share-of-ict-sector-in-total-value-added-2013_9789264232440-graph8-en#.WQiPKNKGNPY
Republic of South Africa. 2014. Local Government: Municipal Financial Management Act, 2003: Municipal Regulations on Standard Chart of Accounts. [Online]. Available at: www.gov.za
Shao, B.B.M. and Lin, W.T. 2002. Technical Efficiency Analysis of Information Technology Investments: A Two-Stage Empirical Investigation. Information and Management. 39:391-401.
Sung, N. 2004. Information Technology, Efficiency and Productivity: Evidence from Korean Local Governments. ITS 2004 15th Biennial Conference, Berlin, Germany.
Wooldridge, J.M., 2009. Introductory Econometrics: A modern approach. Canada: South-Western Cengage Learning.
World Economic Forum. 2016. The Global Information Technology Report: Innovating in the Digital Economy. [Online]. Available at: www3.weforum.org/docs/GITR2016/WEF_GITR_Full_Report.pdf

References for Chapter 11

Bajo, A., and Primorac, M. (2010). Local government borrowing practice in Croatia, Financial Theory and Practice, Vol.34 No.4
Dawood, G. and Pahwa, S. (2005). What will replace RSC levies? Available at: www.afrec.co.za
Government of South Africa (2003a). Local Government: Municipal Structures Act 117 of 1998, Government of South Africa, Pretoria, South Africa
Government of South Africa, (2003b). Municipality Finance Management Act, Government of South Africa,
Pretoria, South Africa
Jooste S. F., Scott W. R. (2011). PPP-enabling organizations an organizational field-level analysis. in Scott W. R., Levitt R. E., Orr R. J. (Eds.), Global projects: Institutional and political challenges (pp. 377-402). Cambridge, UK: Cambridge University Press
Jooste SF and Scott WR, (2012). The Public Private Partnership Enabling Field: Evidence from Three Cases, Administration and Society, March, Vol, 44, No.2 pp 149-182.
Lane T.D (1993). Market Discipline, Volume 40, Issue 1, March pp 53–88
Mahabir J and N Mabhena (2014). Identifying the Funding Constraints in Municipal Capital Investments, Financial and Fiscal Commission Technical Report, Midrand South Africa
National Treasury (2016). Review of the Local Government Infrastructure Grant System, National Treasury,
Pretoria, South Africa.
National Treasury (2008). Budget Review, National Treasury, Pretoria, South Africa
National Treasury — PPP Unit, (2007), Linking MIG and PPPs: Expediting Service Delivery to the Poor and Increasing Private Finance: A Concept Paper, PPP Unit, National Treasury, Pretoria, South Africa
SGS (2016). Technical paper on value capture, Final report, Infrastructure Australia, SGS Economics and Planning Pty Ltd, Canberra, Australia.
Shannon, J. (1987). State Revenue Diversification - the Search for Balance. In The Quest for Balance in State-Local Revenue Structures, edited by F. D. Stoker, 9–37, Cambridge, MA: Lincoln Institute of Land Policy.

UN (2009), Global Report on Human Settlements 2009: Planning Sustainable Cities, UN Habitat, United Nation, New York
World Bank, (2005). The Global Partnership on Output-Based Aid, Output-based Aid: Supporting Infrastructure Delivery through Explicit and Performance-based Subsidies, OBA Working Paper Series, Paper No. 4, March 2005

NOTES

NOTES

NOTES

NOTES

NOTES

NOTES

NOTES

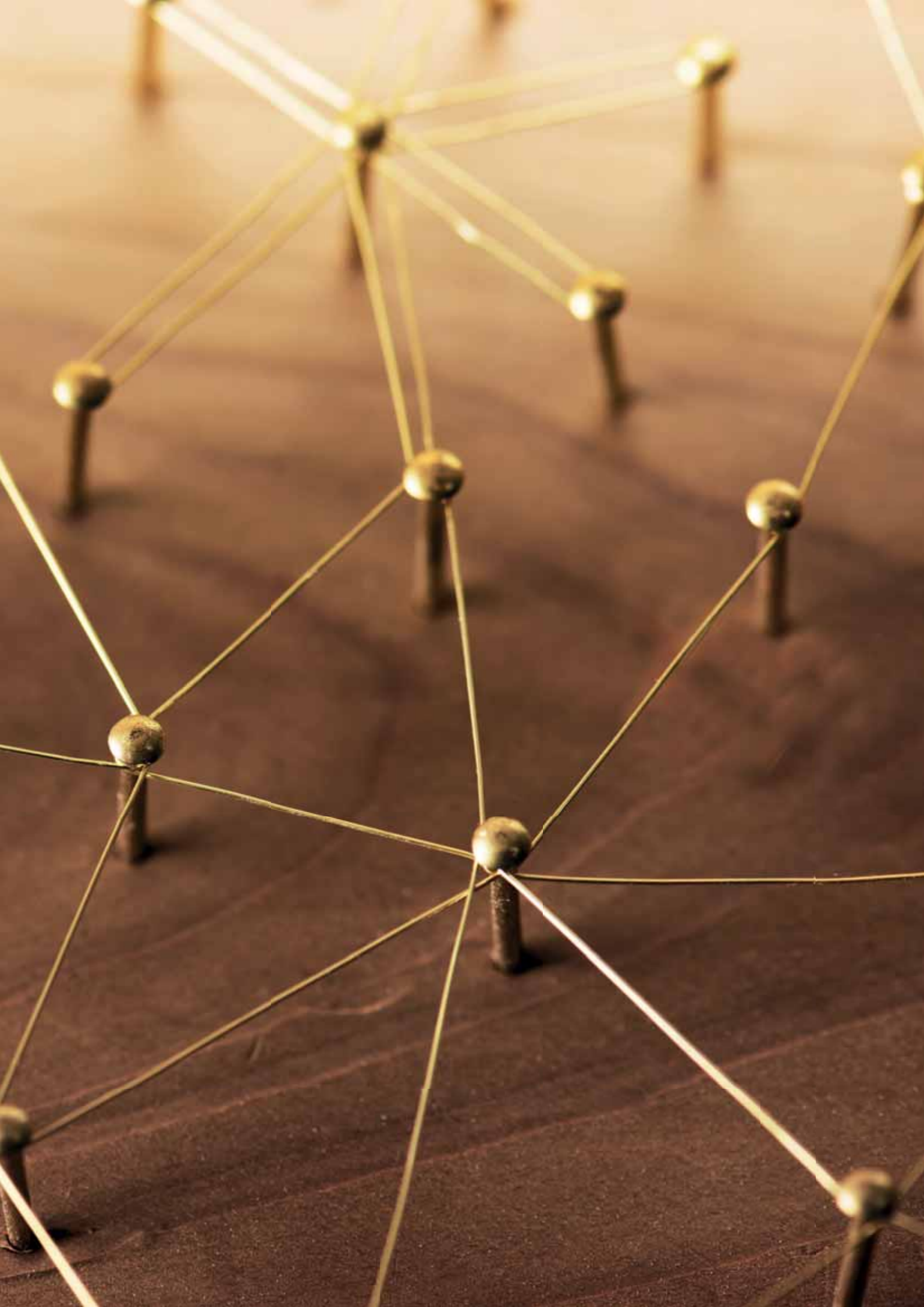
NOTES

NOTES

NOTES

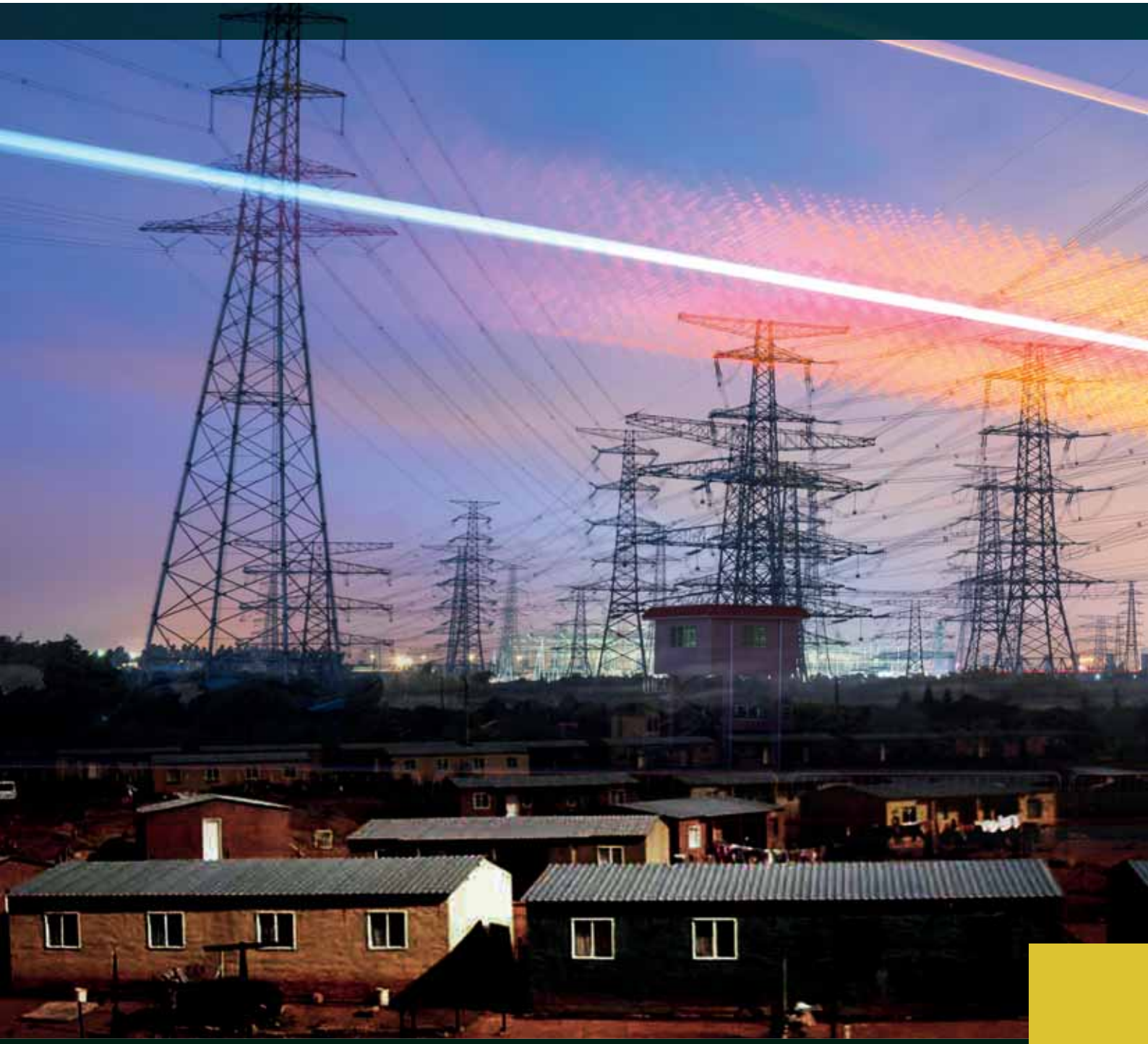
NOTES

NOTES



FINANCIAL AND FISCAL COMMISSION

For an Equitable Sharing *of National Revenue*



FINANCIAL AND FISCAL COMMISSION

—

2nd Floor
Montrose Place
Bekker Street
Waterfall Park, Vorna Valley
Midrand, South Africa
Private Bag X69
Halfway House
1685

Tel: +27 11 207 2300
Fax: +27 86 589 1038

www.ffc.co.za

RP171/2017
ISBN: 978-0-621-45525-0