



SUBMISSION FOR THE DIVISION OF REVENUE **2015/16**

For an Equitable Sharing of National Revenue





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Submission for the Division of Revenue 2015/2016

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TABLE OF CONTENTS

Contents	2
Tables	5
Figures	6
Foreword	8
Acronyms	9
Executive Summary	12

PART 1

Macroeconomic and Fiscal Frameworks for Inclusive Growth

19

Chapter 1: Macroeconomic Perspectives and Fiscal Frameworks	22
1.1 Introduction	23
1.2 Macroeconomic Frameworks and Evolution (1990–2014)	23
1.3 Economic Growth, Employment and Investment	24
1.4 The Economy: What Lies Ahead?	26
1.5 Revenues, Expenditure and Government Deficit	28
1.6 Poverty and Inequality	29
1.7 Concluding Remarks and Assessment	30
Chapter 2: Public Debt Challenges and the Need for Fiscal Reforms	31
2.1 Introduction	32
2.2 Overview of the Debt Market	33
2.3 Methodology and Simulations	35
2.4 Fiscal Consolidation Scenario	36
2.5 Debt Restructuring Scenario	38
2.6 Economic Growth Scenario	39
2.7 Financial Repression Scenario	40
2.8 Inflation Scenario	41
2.9 Conclusion	41
2.10 Recommendations	42
Chapter 3: Social Programmes and the Need for Reform	43
3.1 Introduction	44
3.2 Impact of Social Grants	45
3.3 Methodology	46
3.4 Effects of Social Grants on Consumption and Labour Supply	47
3.5 Comparing the Simulation and Reference Scenarios	48
3.6 Conclusion	51
3.7 Recommendations	52

PART 2

Improving Investments in Education and Health

53

Chapter 4: Equitable Resourcing of Schools for Better Outcomes	55
4.1 Introduction	56
4.2 Methodology	57
4.3 Equal and Adequate Education	58
4.4 Distribution of Resources to Schools	59
4.5 School Subsidy Allocations	61
4.6 Other Essential School Inputs	62
4.7 Translating Resources into Outcomes	64
4.8 Conclusion	68
4.9 Recommendations	67

Chapter 5: Adequacy and Efficiency in Primary Health Care Financing	68
5.1 Introduction	69
5.2 Methodology	70
5.3 Health Care Services in South Africa	70
5.4 Provincial health care services	72
5.5 Conclusion	78
5.6 Recommendations	78

Chapter 6: Impact of Fiscal Expenditure on Food Security	79
6.1 Introduction	80
6.2 Methodology	81
6.3 Funding of Food Security	82
6.4 The Impact of Food Security Programmes	87
6.5 Conclusion	88
6.6 Recommendations	89

PART 3

Investment in Infrastructure

90

Chapter 7: Improving the Financing of Municipal Capital Investments	93
7.1 Introduction	94
7.2 Institutional and Regulatory Arrangements	95
7.3 Municipal Revenue Sources for Capital Expenditures	96
7.4 Public-Private Partnerships (PPPs)	100
7.5 Current Constraints in Municipal Own Revenues for Capital Financing	102

7.6 Alternative Municipal Capital Financing Instruments	102
7.7 Conclusion	104
7.8 Recommendations	104
Chapter 8: Improving Public Transport for Better Mobility	103
8.1 Introduction	106
8.2 Methodology	107
8.3 Evaluation of South Africa's Transport Function	107
8.4 Addressing Public Transport Service Delivery Backlogs at Municipal Level	111
8.5 Conclusion	112
8.6 Recommendations	113
Chapter 9: Administered Prices: The Impact of Electricity Price Increases on Municipalities	114
9.1 Introduction	115
9.2 Institutional and Regulatory Arrangements	117
9.3 Methodology	118
9.4 Impact of Electricity Price Increases	119
9.5 Conclusion	120
9.6 Recommendations	121
Chapter 10: Better Human Settlements through Improved Planning and Funding	122
10.1 Introduction	123
10.2 Methodology	124
10.3 Projected urban housing demand	125
10.4 Key levers to self-build housing and most vulnerable households	127
10.5 Conclusion	129
10.6 Recommendations	130

PART 4

Demarcations and Beyond

131

Chapter 11: The Impact of Demarcations on Municipal Finances	133
11.1 Introduction	134
11.2 Methodology	134
11.3 Findings from the Case Studies	135
11.4 Econometric Results	140
11.5 Alternatives to Mergers and Pre-Conditions for Mergers	140
11.6 Conclusion	142
11.7 Recommendations	143
References	144

TABLES

TABLES

Table 1: Government debt breakdown (2012/13)	34
Table 2: National government financing (2013/14)	35
Table 3: Effect on consumption spending	47
Table 4: Effect on labour supply	48
Table 5: Changes in simulation variables	48
Table 6: Changes in macro variables (%)	49
Table 7: Estimated variance between allocated and stipulated learner subsidies – 2012 (Rand)	60
Table 8: National targets for school allocations (2013)	60
Table 9: Actual provincial allocation per learner against national targets – 2012/13 (Rand)	61
Table 10: Comparison of per learner appropriation by district by type of school (2012/13)	62
Table 11: Provincial own allocations to infrastructure (Rand)	63
Table 12: Correlation matrix – school allocations and education outcomes	64
Table 13: Index of education performance outcomes by province by district (2012)	65
Table 14: Index of education performance outcomes by province by district (2013)	65
Table 15: Bed utilisation rate – district hospitals	72
Table 16: Cost-per-patient-day equivalent – district hospitals (Rand)	73
Table 17: Immunisation rates	73
Table 18: Supervision rate	74
Table 19: Provincial health expenditure growth rates (real) by programme (2005/06–2010/11)	75
Table 20: District health services expenditure growth rates (real) by province (2005/06–2010/11)	75
Table 21: PHC (non-hospital) expenditure per capita (Rand)	75
Table 22: PHC (non-hospital) expenditure per patient visit (Rand)	76
Table 23: Shifts in provincial agriculture expenditure (2001/02–2011/12)	83
Table 24: Food security-related programme expenditure	83
Table 25: Food security programmes and implementation challenges	84
Table 26: Under-spending on capital budgets by municipal type (2003–2010)	96
Table 27: Measures of metropolitan municipalities borrowing (2011/12)	98
Table 28: National transfers to local government through conditional grants (2005/06–2015/16)	99
Table 29: Basic forms of PPP agreements	101
Table 30: Projected number of households per income groups	125
Table 31: Financial and fiscal costs associated with demarcation	142

FIGURES

Figure 1: Employment in South Africa	25
Figure 2: Gross fixed capital formation by category (2005 prices year on year changes)	26
Figure 3: Government deficits as % of GDP (1990–2013)	29
Figure 4: Government debt (1990–2013)	32
Figure 5: Impact on real GDP following fiscal consolidation	36
Figure 6: Impact on public debt following fiscal consolidation	36
Figure 7: Impact on real GDP following increased tax rate on firms	37
Figure 8: Impact on real GDP following debt restructuring	38
Figure 9: Impact on the public debt of economic growth	40
Figure 10: Impact on real GDP	40
Figure 11: Simplified presentation of the analytical framework	47
Figure 12: Poverty and inequality indexes	49
Figure 13: Effects on consumption prices (%)	50
Figure 14: Effects on household income and consumer prices (%)	50
Figure 15: Households' expenditure budget share (%)	51
Figure 16: PES per capita allocations (2001–2012)	59
Figure 17: Health expenditure as a proportion of GDP	70
Figure 18: Estimation of wasteful expenditure in the public health care sector	71
Figure 19: Real growth rates by economic classification	74
Figure 20: Average increase in commodity prices (South Africa)	80
Figure 21: Methodology for measuring impact of food security programmes	82
Figure 22: Expenditure on agriculture conditional grants (2005/06–2012/13)	82
Figure 23: Value chain of the CASP grant	86
Figure 24: Municipal capital expenditures by municipal type (2003/04–2009/10)	94
Figure 25: Municipal capital expenditure per budget line item (2003/04–2010/11)	95
Figure 26: Sources of funding for capital expenditures (2003–2011)	96
Figure 27: Borrowing trends across municipal types (2003/04–2009/10)	97
Figure 28: Characteristics of an effective and efficient municipal credit market	98
Figure 29: Financing of capital expenditures by own funds and transfers (2006/07–2012/13)	102
Figure 30: Trade-offs affecting tariff levels and structures	116
Figure 31: Structure of the electricity generation and distribution sector in South Africa	118
Figure 32: Impact of electricity price increases on municipal expenditure	119
Figure 33: Impact of electricity price increases on municipal revenue	119
Figure 34: Model flow overview	124
Figure 35: Number of households per location (2011 and 2030)	125

Figure 36: Number of households in the CBD	126
Figure 37: Changes in preferred form of tenure by 2030	126
Figure 38: Changes in preferred housing typology by 2030	127
Figure 39: Female- and male-headed income groups (%)	128
Figure 40: Estimates of replacement housing value and appropriate public support level	128
Figure 41: Revenue and expenditure in the incorporated municipalities	136
Figure 42: Capital expenditure in the incorporated municipalities	136
Figure 43: Total expenditure and revenue before and after incorporation	137
Figure 44: Capital expenditure before and after incorporation	137
Figure 45: Total expenditure and total revenue before and after incorporation	138
Figure 46: Capital expenditure before and after incorporation	138
Figure 47: Total expenditure and revenue before and after demarcation	139

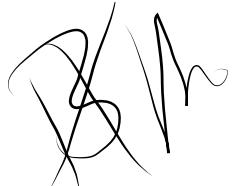
FHIS Submission for the 2015/16 Division of Revenue is made in terms of Section 214(1) of the Constitution of the Republic of South Africa (1996), Section 9 of the Intergovernmental Fiscal Relations Act (1998) and Section 4(4c) of the Money Bills Amendment Procedure and Related Matters Act (Act 9 of 2009).

The theme for this year's Submission is "*Balancing fiscal sustainability with socio-economic impact*", which is what is needed to address the challenges of potential public debt unsustainability and high levels of poverty and inequality. The economy has to grow fast enough to provide the necessary revenue for government's socio-economic programmes. The redetermination of municipal boundaries and consequent mergers is a key issue for the 2015 division of revenue. The Commission has reviewed past experience with demarcation processes and is making proposals around addressing the potentially negative impacts of mergers on the financial and fiscal performance of merged municipalities. A dynamic economy requires investment in people (human capital) and in equipment and physical structures (infrastructure), as well public services that are delivered effectively and efficiently, at a cost that South Africans can afford. The Commission is of the view that affordability and excellence are not incompatible and can be accomplished through improved intergovernmental relations.

'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, the Minister of Finance and the National Treasury for their support, the South African Local Government Associations, the Chairpersons of the Finance and Appropriations Committees in the Provincial and National Legislatures and various technical advisers and the Staff of the Commission.

We, the undersigned, hereby submit the Financial and Fiscal Commission's recommendations for the 2015/16 Division of Revenue in accordance with the obligations placed upon us by the Constitution of the Republic of South Africa.

For and on behalf of the Commission



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Date: 30 May 2015

ACRONYMS

AGSA	Auditor-General of South African
AIDS	Acquired Immune Deficiency Syndrome
ANA	Annual National Assessment
ANC	African National Congress
AsgiSA	Accelerated and Shared Growth Initiative for South Africa
BAU	Business As Usual
BESA	Bond Exchange of South Africa
BNG	Breaking New Ground
BOT	Build-Operate-Transfer
CAP	Consolidated Agricultural Programme
CAPS	Curriculum and Assessment Policy Statement
CASE	Community Agency for Social Enquiry
CASP	Comprehensive Agricultural Support Programme
CBD	Central Business District
CDG	Care Dependency Grant
CGE	Computable General Equilibrium
CHC	Community Health Centre
Cosatu	Congress of South African Trade Unions
CPD	Corporation for Public Deposits
CPI	Consumer Price Index
CSG	Child Support Grant
CWG	Community Works Programme
DAFF	Department of Agriculture, Forestry and Fisheries
DBE	Department of Basic Education
DBO	Design-Bid-Build
DEA	Data Envelope Analysis
DoH	Department of Health
DoT	Department of Transport
DRDLR	Department of Rural Development and Land Affairs
DSD	Department of Social Development
EIA	Environmental Impact Assessment
EPWP	Expanded Public Works Programme
EU	European Union
FBE	Free Basic Electricity
FCG	Foster Child Grant

FFC	Financial and Fiscal Commission
FGT	Foster, Greer and Thorbecke
GDP	Gross Domestic Product
GEAR	Growth Employment and Redistribution
GFCG	Gross Fixed Capital Formation
GVA	Gross Value Add
HIV	Human Immunodeficiency Virus
HRM	Halifax Regional Municipality
IDP	Integrated Development Plan
IFSS	Integrated Food Security Strategy
IMF	International Monetary Fund
KIDS	KwaZulu-Natal Income Dynamics Study
KZN	KwaZulu-Natal
LGFF	Local Government Fiscal Framework
MDB	Municipal Demarcation Board
MDG	Millennium Development Goals
MEC	Member of Executive Council
MFMA	Municipal Finance Management Act
MIG	Municipal Infrastructure Grant
NDP	National Development Plan
Nersa	National Energy Regulator of South Africa
NGO	Non-Governmental Organisation
NGP	New Growth Path
NHI	National Health Insurance
NNP	National Nutrition Programme
NNSSF	National Norms and Standards for School Funding
NPC	National Planning Commission
NPNC	Non-Personnel, Non-Capital
NSNP	National School Nutrition Programme
OECD	Organisation for Economic Cooperation and Development
PED	Provincial Education Department
PES	Provincial Equitable Share
PHC	Primary Health Care
PPP	Public-Private Partnership

RDP	Reconstruction and Development Programme
RED	Regional Electricity Distributor
SACMEQ	Southern and Eastern African Consortium for the Monitoring of Education Quality
SACP	South African Communist Party
SALGA	South African Local Government Association
SAM	Social Accounting Matrix
SARB	South African Reserve Bank
SASA	South African Schools Act
SASSA	South African Social Security Agency
SGB	School Governing Board
StatsSA	Statistics South Africa
StepSA	Spatial Temporal Evidence for Planning South Africa
TIMSS	Trends in International Maths and Science Survey
UIF	Unemployment Insurance Fund
Unicef	United Nations Children's Fund
USA	United States of America
WHO	World Health Organisation

EXECUTIVE SUMMARY

Government has set a course of economic and social reforms with the key foundation being the National Development Plan (NDP). Excellent public services are critical to achieving the NDP's vision. The Commission understands and supports the desire for excellent public services, provided they come at a cost that South Africans can afford. The country faces three overarching tasks in achieving this goal: (1) to understand and address directly the urgent economic growth and employment creation challenges; (2) to establish a balanced fiscal position that can be sustained over the long term; (3) to sharpen the efficiency with which government carries out its functions, so as to provide greatest value for money. This is the message of this year's Submission delivered under the theme:

"Balancing fiscal sustainability with socio-economic impact"

The country faces more severe economic and fiscal challenges than most people realise, at a time of deep and widespread uncertainty over the world economy and its financial system that is unparalleled since the Great Depression. But even after the world economy once more finds its footing, South Africans cannot assume that strong economic growth will follow, especially given the poverty and inequality challenges facing the country. The government needs to have steady and dependable revenue growth in order to finance programmes over the long term. An expanding economy is the foundation for rising revenues. If the economy fails to grow quickly enough, South Africa's revenues will fall short of the sums needed to support existing government programmes as well as the ambitious new programmes to which the NDP aspires. This will put pressure not only on government's current initiatives to realise socio-economic rights in the medium term (such as National Health Insurance) but also on the more ambitious NDP aspirations of eradicating poverty and increasing income equalities by 2030. Hard trade-offs will have to be made to strike a balance between fiscal sustainability and protecting (and extending) the existing socio-economic gains.

If policy-makers are to attain this balance, their priority should always be to improve economic prospects. In order to raise long-term economic growth, structural reforms will be required across multiple institutions, as many of the problems are interlinked. Central, provincial and municipal governments all deliver public services, at times with inconsistent objectives and uncoordinated activities. Relations among the three spheres of government (e.g. a province's relations with the central government and with municipalities) will impact on economic growth and the realisation of socio-economic rights. Most of the initiatives covered in this Submission, relating to education, health, electricity, water and housing, have an intergovernmental dimension. Intergovernmental relations should aim to strengthen the long-term financial development and sustainability of local, provincial and national governments.

Government should continue with efforts to address the fiscal position, which is entirely within its control. Sustained deficits, which can undermine the country's economic and social future, are not inevitable. Reforms to the delivery of public services can contribute not only to increasing economic growth but also to achieving the balance between fiscal sustainability and socio-economic impacts. These reforms are both desirable in their own right to improve the quality and access to public services, as well as to lower costs. Affordability and excellence are not incompatible and can be accomplished through greater efficiency that serves both the fiscal imperative and South Africans' desire for better-run programmes. However, in order to protect and extend the existing socio-economic gains, the country will have to do things differently. Decisions will have to be made, to ensure that growth is not compromised by further fiscal tightening on the expenditure side and additional revenue raising.

The Submission begins by analysing South Africa's economic story to date (Section I). This section sets the macroeconomic and fiscal background for the Submission and sketches alternative fiscal policy adjustment paths. South Africa is facing two major macro-fiscal challenges. The first one is a long-term problem, of potential public debt unsustainability, which may require greater fiscal discipline in a way that least jeopardises short-term economic growth and enhances longer-term economic growth and employment prospects. The second is a more pressing economic problem, of how best to deal with high levels of poverty and inequality. Social programmes help the country's most vulnerable citizens. Addressing the poverty and inequality challenges will require bold policy prescriptions, new partnerships and a continuing commitment to transform these programmes. These macro-fiscal challenges

affect future fiscal frameworks because of their impact on public sector efficiency, public and business confidence and, more broadly, the efficient use of resources that are essential for the economy to develop and grow. Moreover, programmes should be integrated across different departments and different spheres of government, putting the vulnerable citizens' perspective first. Vulnerable people and their families do not care which sphere of government or which department is responsible for providing support – they just want help.

The remainder of the Submission looks at how South Africa, especially through the intergovernmental system, can create better conditions for inclusive growth. Ensuring greater impact and efficiency of public spending is one way to reconcile the dwindling fiscal space with the need to stimulate economic growth, encourage participation in the economy and improve equity. Creating a dynamic economy requires three basic investments: in people (human capital), in equipment and physical structures (infrastructure) and in new ideas and technologies (innovation). Two previous submissions have covered innovation and research and their recommendations remain relevant. This year's Submission focuses on the first two investments. It looks at how the causes of lower productivity levels are linked to investment failures in human capital (basic education, health and food security), in Section II, and in infrastructure (municipal infrastructure, transport, electricity and housing), in Section III. South Africa already spends significant amounts of money on health, education and other human capital investment, but while access has improved dramatically, there is a crisis of quality. Furthermore, despite substantial resources directed successfully at infrastructure, poor infrastructure planning and implementation, escalating costs, supply chain management fraud and inefficiency, and inadequate maintenance have meant that infrastructure outcomes have often fallen short of expectations. Effective resource allocation is not just about sharing resources fairly across spheres of government. An often-ignored issue is the effect on resource allocation of changes to municipal boundaries (re-demarcation). The last part of the Submission (Section IV) suggests a fiscally prudent way of carrying out demarcations of municipal boundaries in order to minimise the negative impacts on the financial and fiscal performance of municipalities.

The Recommendations

Below is the list of the recommendations of the Commission for the 2015/16 Division of Revenue.

With respect to keeping a check on the deficit and public debt in ways that contribute towards fiscal sustainability and socio-economic development, the Commission recommends that:

1. Government avoids setting rigid public debt targets. While keeping debt low has historically been considered desirable, borrowing is a valid and appropriate option available to government to help finance ongoing infrastructure and developmental requirements consistent with realising the aspirations of the NDP. This presumes that debt management continues to have the objective of raising the required funding at the lowest possible cost within a given risk tolerance.
2. Government does not resort simply to cutting costs to reduce public debt. The need to restrain spending should be an opportunity to reform programmes and service delivery. Simple cost-cutting may be effective in achieving deficit reduction targets but does not encourage longer-run fiscal stability or allow for reforms that will generate more value for money spent.
3. Government avoids across-the-board cuts or expenditure ceilings as a means of debt control. Such blunt tools treat valuable, efficiently run programmes and outdated, poorly managed programmes in the same way. Spending should be aligned with government priorities, to ensure adequately funding of high-priority initiatives and elimination or substantial reduction of lower-priority programmes.

With respect to social programmes to eliminate poverty and reduce inequality, the Commission recommends that Government:

1. Moves aggressively towards a fully integrated benefits system that simplifies client access, improves client outcomes and improves fiscal sustainability through greater programme effectiveness, reduced fraud and corruption, and reduced administrative costs.
2. Implements a fully integrated benefits system that seeks efficiencies by, at a minimum, centralising income testing and payment delivery; automating the processing of applications, eligibility and payments, and automating income verification and consolidating programme delivery.
3. Collects the information necessary to deliver and evaluate a fully integrated benefits system. In so doing, personal information and privacy should continue to be respected and protected.

With respect to equitable resourcing of schools for better outcomes, the Commission recommends that:

1. The Department of Basic Education aligns learner subsidy allocations with national policy requirements and priorities. The current baselines do not cater for the significant increase in funding to cover the curriculum requirements i.e. Curriculum Assessment Policy Statement (CAPS), norms and standards for school infrastructure and municipal services to schools among others. The alignment must be accompanied by enhanced oversight of provincial education departments (PEDs) to ensure adherence to national policy priorities.
 - a. PEDs must reprioritise their budgets for public ordinary schools away from personnel, ensure an appropriate mix of teaching and non-teaching staff, make adequate provision for learners' subsidies within the public ordinary school programme and redirect resources towards districts that experience multiple performance obstacles.
2. The allocation framework to schools takes into account the full package of minimum education inputs when deriving the minimum adequate benchmark funding per learner, in order to address the skewed distribution of resources between schools and districts. These inputs must be linked to both the process norms and output standards.
3. The allocation framework for education infrastructure conditional grants sets out clear expenditure targets for quintile 1 to 3 schools and timelines for addressing priority infrastructure backlogs in each quintile. The School Infrastructure Backlogs Grant must also make provision for a transitional asset handover process of new schools to School Governing Boards (SGBs) and PEDs on newly built schools. This would address alignment between funding for non-physical inputs and physical inputs, as well as curb decaying of newly constructed infrastructure.
4. School funding norms and standards explicitly indicate the responsibilities of schools and PEDs for maintaining and upgrading school infrastructure, so that the division of expenditure responsibilities is clear, in order to avoid prolonged neglect of infrastructure upgrades and to ensure consistent budget allocation to maintenance and its monitoring thereof.
5. School expenditure and performance are monitored at national and provincial level and accompanied by inspectorate visits. The Department of Basic Education and National Treasury must monitor provincial learner subsidy allocations and intervene where national targets are not met or allocations not transferred to schools timeously. This can be done by means of a portal similar to EMIS where individual no-fee schools can report payment delays and other problems.
 - a. PEDs must, with the assistance of the national department, standardise monitoring of school-level expenditure and performance and, where necessary, provide shared services for preparing and auditing financial services.
6. The Department of Basic Education integrates existing outcomes improvements programmes, such as the integrated national strategy to improve numeracy and literacy, and targets them

at poor performing districts, to improve translation of inputs into outcomes. Schools should be placed under the programme for a set period during which necessary infrastructure upgrades are carried out, skilled teachers are attracted and existing teachers trained, learner-specific interventions are carried out and, more importantly, SGBs are trained. This would ensure interventions are holistic and targeted at the schools that experience multiple performance constraints and, more importantly, reduce inter-provincial variation in performance.

With respect to improving adequacy and efficiency in primary health care (PHC) financing, the Commission recommends that:

1. Provincial governments increase their allocation levels to PHC funding, to be in line with the minimum norms and standards for the PHC package set by the National Department of Health, in particular on clinic services such as integrated management of childhood illnesses, reproductive health and HIV/AIDS.
2. Inefficiencies (wasteful/irregular expenditure) in the health sector are minimised to be in line with international experience: Wasteful expenditure needs to be identified, categorised and addressed:
 - a. clinical waste, through clinical performance measures that promote efficient use of resources (cost effectiveness, research and information dissemination).
 - b. operational waste, through measures such as standardisation of system processes and procedures
 - c. behavioural waste, through measures such as preventative services advocacy so as to avoid unnecessary complications or illnesses.

With respect to improving public expenditure impacts on food security, the Commission recommends that:

1. Department of Agriculture, Food and Forestry (DAFF) strengthens its ability to enforce the conditions in the grant framework to ensure better oversight of provinces, so that spending and performance of the agricultural conditional grants can be improved. The Commission suggests that norms and standards be developed to assess the performance of provinces and five-year evaluations of conditional grants be institutionalised.
2. Special focus is put on improving the operations of different food security programmes, especially Agriculture, EPWP and the School Nutrition Programme, which accelerate reduction in household food security without necessarily increasing programme expenditure. Areas that can yield improved results include better joint planning (such as creating a value chain between small-holders receiving grant support and the NSNP) and streamlining procurement processes with the assistance of the Chief Procurement Office. The ability to use available resources optimally for the food security programmes have declined overtime.
3. Government clarifies the legislative mandate and responsibility of municipalities in relation to food security. In this regard, DAFF should develop a policy on urban food security with concrete proposals on how such a mandate will be funded. Currently, food security is not seen as a competence of municipalities and therefore cannot be funded.
4. The terms of reference for the committee to review the agricultural conditional grants are finalised without unnecessary delays. The review should be comprehensive in scope and should include assessing the value chain of conditional grants and unlocking operational constraints, especially in relation to planning, procurement, comprehensive smallholder support, cash-flow and monitoring and evaluation. Stakeholders such as the Department of Rural Development and Land Reform (DRDLR) should be invited to be part of the committee, and ways to streamline the funding overlap between the Illima/Letsema grant and the recapitalisation and development programme should be examined.

With respect to improving the financing of municipal capital investments, the Commission recommends that:

1. The monitoring and evaluation of municipal capital planning and investment spending are improved. National and provincial treasuries should improve this assessment during municipal benchmarking exercises by:
 - a. Ensuring that capital budgets are realistic and financed, based on capacity to deliver and revenue assumptions.
 - b. Placing a greater emphasis on refurbishing and renewing existing infrastructure stock, as determined by the municipality's asset register
 - c. Ensuring that tariffs are appropriately designed, so that the depreciations costs of existing infrastructure and the funding of new infrastructure are recovered from the tariff. The design of such tariffs should explicitly consider the customer affordability and protection of the poor.
2. Municipalities use alternative and innovative methods to fund and deliver infrastructure, if capacity to plan and spend remains a concern. These municipalities should explore:
 - a. Increasing interaction and partnerships with other organs of state (such as Eskom and Water Boards).
 - b. Greater use of private-public partnerships (PPPs), including fully or partially outsourcing municipal services accompanied by effective contract management and appropriate risk transfer.
3. The PPP unit within the National Treasury improves its monitoring and evaluation of municipal PPPs. This should include:
 - a. Maintaining a dataset of existing municipal PPPs.
 - b. Evaluating the success/failures of existing PPPs and disseminating good practices and awareness of risks.
 - c. Quantifying the uptake of PPP agreements and assessing the current bottlenecks that discourage the use of PPPs.
4. Government explores a new funding and infrastructure delivery model for poorly resourced rural municipalities. It is clear that the capacity to service infrastructure needs in these areas is extremely inadequate. There is potentially a greater role for State-owned companies and other state agents to deliver infrastructure on behalf of these municipalities.

With respect to improving public transport for better mobility, the Commission recommends that:

1. All municipal integrated transport plans indicate clearly how the municipalities intend to exercise control over the network, including the required resources. This should be one of the minimum requirements for preparing integrated transport plans and should be gazetted accordingly.
2. The Department of Transport (the custodians of national transport policy) formulates and implements a transport subsidy framework, which explicitly incorporates social welfare, service productivity and environmental management, which are the three aspects endorsed by national transport policy.
3. Given the ever increasing complexity of modern transport networks, municipalities are guided on the minimum skillset required to be able to manage modern transport systems. This is one of the critical interventions to unlock service delivery constraints and should be carried out jointly by the Department of Transport and the South African Local Government Association.

4. A comprehensive review of municipal integrated transport plans is carried out, with a view to identifying gaps that need to be addressed. This should be carried out jointly by the Department of Transport and the South African Local Government Association.

With respect to electricity pricing, the Commission recommends that:

1. Government puts in place a plan to manage the risks to municipalities associated with increases in the price of bulk electricity purchases. Such a plan should:
 - a. Consider the implications of increases in the price of bulk electricity purchases on municipal expenditure (to the extent that increases may crowd out expenditure on other items) and revenue (to the extent that revenue needed to fund maintenance, asset renewal or cross-subsidisation may be eroded).
 - b. Be explicit in terms of the impact that increased prices of bulk electricity purchases will have on different categories of municipalities. The crafting of this plan is particularly important given developments aimed at prioritising environmental sustainability such as, for example, the pending implementation of the carbon tax and its implication for the cost of bulk electricity purchases.

With respect to housing demand and self-build housing initiatives, the Commission recommends that:

1. Municipalities, especially metros, invest in forward-looking processes and systems that will enable them to understand and disaggregate housing demand accurately.
2. Metros focus on planning for rental flats and creating new (or transforming existing) neighbourhoods in intermediate suburbs, which have lower densities than the inner city.
3. Government's housing subsidy prioritises the most vulnerable groups, which include poor female-headed households with children below the age of 20 years and households containing adults who are permanently out of the labour market.
 - a. Targets and indicators should be put in place and closely monitored annually.
 - b. The national Department of Human Settlements should report on households benefitting from government housing programmes based on gender and by age group on a yearly basis.
4. Municipalities prioritise land ownership registration processes where informal settlements are located in the developable areas.
5. Government prioritises the provision of infrastructure in areas with the potential for self-build housing.

With respect to impact of demarcations on the financial performance and sustainability of municipalities, the Commission recommends that:

1. The financial and fiscal implications of boundary re-determinations are prioritised and established before any demarcation decision is pronounced. A funding stream for the demarcation process should be identified before the process takes effect. In order to avoid the negative effects of demarcations on municipalities and their populations, economic considerations (i.e. both fiscal and financial) should be at the core of any demarcation decision, both in theory and in practice. The current criteria are clear that economic considerations should be part of the criteria, but this does not appear to be the case in practice.
2. For every vertically decided demarcation process, government bears the transitional costs of the restructuring. A transitional demarcation grant should be awarded to the amalgamated municipality. This grant should be temporary and be awarded over at least three years (at least a year

before, the year of and the year after demarcation takes place). The purpose of the grant will be to facilitate the restructuring process. This includes the following:

- a. Planning and preparing an amalgamated municipality's delivery model, e.g. combining the delivery models of individual municipalities.
- b. Rationalising and harmonising policy regimes, IDPs and bylaws of different municipalities.
- c. Rationalising tariffs.
- d. Rationalising employment policies and other human resources systems (grading of workers and job evaluation processes).
- e. Rationalising and harmonising evaluation rolls and assert registers.
- f. Building capacity to deal with change management.
- g. Facilitating communication about the demarcation.

PART I

Macroeconomic and Fiscal Frameworks for Inclusive Growth

South Africa's public finances may become increasingly vulnerable with prolonged domestic sluggish economic growth rates and continued global international pressures. With early strong action, any potential crisis can be averted and the economy's resilience can be enhanced. Crises always spur urgent action, but they also almost invariably bring forth bad public policy decisions. Faced with the need to make corrections in very short order, governments grasp at what look like fast and easy solutions, but too often meet the demands of the present by foisting the attendant costs onto future generations to pay. The lessons of history and of what is happening elsewhere today are clear: the government must take fiscal action early, before today's challenges are transformed into tomorrow's crises. A challenge, unlike a crisis, can be met with well-considered, firm, steady and even imaginative action that deals with the problems methodically and phases in the needed changes over a period of years, giving business and households a chance to adjust.

Fiscal policy must strike a delicate balance between insufficient consolidation, which undermines financial markets' trust in fundamental solvency, and excessive consolidation, which reduces growth. Such an equilibrium requires government to have a comprehensive economic and debt management strategy. However, while ensuring the sustainability of fiscal policy is a crucial precondition for realising the aspirations in the National Development Plan (NDP), sight should not be lost of the high unemployment, poverty and inequality that characterise the economy. There is a need to find appropriate short-term strategies to meet the goals of the NDP.

This section contains three chapters intended to address these problems.

Chapter 1 traces major economic and fiscal developments in the past 20 years, providing a context to the rest of the Submission. It argues that, despite major successes in socio-economic development and macroeconomic management, many challenges remain. These relate to the failure to invest sufficiently in mid-level skills, to build adequate infrastructure, to provide a supportive environment for private investment and innovation, and to distribute the fruits of growth more widely.

Chapter 2 examines the public debt challenges and the need for reform of the fiscal frameworks. South Africa's economic growth has been insufficient to generate the income levels envisaged by the NDP. Circumstances could arise whereby meeting the financial requirements to translate the ambitious goals of the NDP into reality would be difficult, if not impossible. While South Africa's fiscal policy continues to be prudent, public debt has increased during and in the aftermath of the recent global economic and financial crisis (like in many other countries). In the absence of expenditure reform, the risk of decline (or subdued growth) in output is a threat to fiscal stability. This chapter discusses the evolution of public debt and its impact on the economy, and makes recommendations on how to mitigate the risks of domestic debt. It argues that, to prevent debt exploding over time, policy-makers have to respond to the changing conditions in their tax base (economic growth) and to the cost of finance (interest rates). Policy rules can help to ensure that, at given moments, government's specific fiscal policy stances are adjusted to changes in the environment, so that debt will not spiral out of control. The chapter defines the conditions that will ensure compliance with the government's intertemporal¹ budget constraint. The empirical part of the chapter shows that public debt is sustainable in this respect. However, compliance with the government's intertemporal budget constraint is a necessary condition for debt sustainability but may not be sufficient.

Chapter 3 is on social programmes and the need for reform. As South Africa seeks to boost economic growth, socio-economic pressures may intensify, jeopardising the sustainability of that growth and the wellbeing of the population. The social security system plays a central role in alleviating and reducing poverty, vulnerability, social exclusion and inequality. As defined within the fiscal framework, the social protection system has two separate but interrelated entities, one dealing with social assistance and one with social insurance. Social assistance is represented by the grants system, through which the state provides basic minimum protection to relieve poverty, whereas social insurance refers to mandatory employee contribution schemes. A number of studies have looked at the impact of the programme on beneficiaries, but this research looks at two new aspects: (1) The state of the South African economy if no beneficiaries received a social grant, to understand

¹ Intertemporal describes how current decisions affect what options become available in the future. For example, restraining the present budget will result in more money available for future development.

the biases introduced by the social grant into the South African economy and to assess its overall impact, (2) The overall impact of several grants. The chapter's findings confirm the hypothesis that social grants have significant and important indirect effects on labour-market participation and households' total consumption patterns, consumption budget shares and saving-investment behaviour. This becomes important, as the size of the programme continues to increase. While fiscal prudence and consolidation are pursued in the medium term, the analysis shows that social security spending contributes to faster economic growth and to reducing inequality.

CHAPTER 1

Macroeconomic Perspectives and Fiscal Frameworks

1.1 Introduction

South Africa's National Development Plan (NDP) Vision for 2030 clearly states that fiscal policy is expected to play a central role in influencing the pace at which the economy will grow and its capacity to deal with the key challenges that will arise over the next several decades (NPC, 2011). Domestic policy challenges include poor education and health outcomes, rapid urbanisation, environmental hazards, infrastructure capacity weaknesses and inadequate investment levels, and household and spatial inequalities. External challenges include immigration and an uncertain global economic environment. Fiscal policy will affect not only macroeconomic stability but also the country's ability to transition to a higher economic growth path, reduce poverty, and address the substantial income, asset and regional inequalities.

Five years have passed since the 2008 global economic and financial crisis, which led to prolonged and previously unforeseen fiscal deterioration and left South Africa with serious challenges. Although the height of the crisis is well past, its aftermath persists, and South Africa remains some way from the strong and sustainable economic growth rates required by the NDP.

Economic growth is the increase in a country's capacity to produce goods and services. Such gains lead to the improved material wellbeing of citizens, through higher consumption, greater leisure and/or improved public services. These fruits of growth should be as *inclusive* as possible rather than appropriated by a small, fortunate slice of society. Thus, similar to most other economies, South Africa has mechanisms in place for distributing the fruits of growth more widely, through taxes, benefits and the provision of public goods such as education and health, as well as equipping citizens with skills that give them the best chance of participating in the economy.

Policies that have a small positive effect on the annual rate of economic growth can have a huge effect on long-term human wellbeing, as these increases become compounded over time. An economy that grows at 2% per year in real terms (which was about South Africa's average growth rate between 2000 and 2008) doubles its material living standards every 35 years. The modern theory of economic growth argues that the world's potential to grow in the long term is determined by the accumulation of ideas – scientific, technological and managerial – that enable more to be done with the existing raw materials (Agenor and Montiel, 2008). Sustainable growth is not about increasing the basic labour input of the population but rather about finding ways to do new things, as well as doing the same things more efficiently.

This chapter provides a concise summary of the main economic episodes, policy trends and performance of the South African economy over the past 20 years. It then goes on to highlight specific problems that continue to beset the economy and are discussed in the rest of the Submission. The final section of the chapter discusses what lies ahead for the economy. The chapter does not give recommendations but frames the economic and social context underlying the main recommendations in this Submission.

1.2 Macroeconomic Frameworks and Evolution (1990–2014)

The National Party was in power during the four years leading to the first democratic elections in 1994. During this period, the government supported four nominally independent homeland states and six self-governing areas, all of which had high and growing fiscal requirements. At the same time, severe international sanctions were limiting economic progress, political tensions were high, and violence and worker mass actions were widespread. From 1992, despite some degree of co-governance with the new political leaders, the incumbent National Party maintained responsibility for managing the country's economy.

Having been widely publicised prior to April 1994, the Reconstruction and Development Programme (RDP) became the official macroeconomic policy of the new African National Congress (ANC) government (ANC, 1994). The RDP contained ambitious socio-economic goals and envisaged massive changes to the structure and governance of the economy. A minister was assigned to spearhead the programme, which was given a budget to supplement the line budgets of other government departments. Despite laudable goals, the RDP implementation structure was found to be cumbersome. At the same time, fiscal concerns were raised over the sustainability of the national budget given the demand on the fiscus and the already high public debt level.

Against this background, in June 1996 the government adopted the Growth, Employment and Redistribution (GEAR) programme, which sought to achieve high employment, and economic growth and redistribution, under fairly strict fiscal constraints. However, the government's alliance partners – the Congress of South African Trade Unions (Cosatu) and South African Communist Party (SACP) – did not support the programme, regarding it as excessively constrained and similar to structural-adjustment programmes typically prescribed by the Bretton Woods institutions of the International Monetary Fund (IMF) and World Bank. Nevertheless, the programme had a fiscal effect, and the country's budget deficit reduced steadily over the next several years.

In 2006, the Accelerated and Shared Growth Initiative for South Africa (Asgisa) framework was introduced, as an extension (and possible softening in approach) of the GEAR programme. It was not a departure from the fiscal stringency of the GEAR framework but rather a reorientation, which was aimed at making government expenditure more effective in achieving social goals. Asgis took note of the binding constraints that stood in the path of accelerated economic growth for South Africa, including the inadequate skills base, ability of the state to lead, and supply and value chain problems. The framework was not as contentious as the GEAR programme, but the opposing parties (such as Cosatu and SACP) regarded the GEAR programme as still being in effect at macroeconomic policy level.

Following the national elections of 2009² and the change in presidency, the National Planning Commission (NPC) was charged with producing a broad national plan through wide consultation and the use of a non-government panel of leading experts. In November 2011, the NDP was completed and, subsequently, widely discussed until its formal adoption as the economic policy direction at the ANC's conference in December 2012. The NDP has gained widespread acceptance across South African society but is still vociferously criticised by some trade union groupings, in particular the National Union of Metalworkers of South Africa.

The NDP is a broad, wide-ranging document. Economic policy is just one aspect of the plan, which contains goals to be achieved by 2030³. Its economic vision is an average annual economic growth rate of 5.4% and the creation of 11 million new jobs by 2030, with five million jobs by 2020, which implies over 500 000 jobs per annum through to 2020. The intention is to reduce unemployment to around 14% by 2020 and to 6% by 2030. The targeted investment-to-GDP ratio is 30% by 2030 (from around 20% at present), with the aim of increasing the growth trajectory of the economy. Public sector investment (including government enterprises and public corporations) will contribute significantly to the increased investment level, increasing to a ratio of 10% to GDP (from the present 7%). The expansion of the public sector investment, by around 50% in relative terms to GDP, has major implications for fiscal policy and for public debt financing.

1.3 Economic Growth, Employment and Investment

From 1990 to 1992, the South African economy experienced negative growth, the combination of increased domestic protests and industrial action, and international sanctions and slow export demand from major trading partners. As the country moved towards the negotiated and internationally accepted democratic elections of 1994, the economy began to improve, growing by a modest 1.2% in 1993, followed by four years of 3–4% growth. In 1998, the economy grew by only 0.5% because of the international Asian crisis and high domestic interest rates instituted to combat exchange rate speculation. However, thereafter (until the 2008 international financial crisis) the economy achieved robust growth rates: from 2004 to 2007 growth rates were above 4.5%, reaching 5.6% in 2006 and 2007. Growth began falling in 2008, but the full effects of the international crisis on the domestic economy were felt in 2009, when the growth rate was negative (-1.5%). Although South Africa's financial institutions remained stable and robust during the financial crisis, the economy was severely affected by the fall-off in exports that resulted from the recessionary conditions in the major developed economies supplied by South Africa. In 2010 and 2011, the economy recovered slightly, growing at just above 3%, but export demand from developed countries remained slow. Since then, as poor growth continues in developed economies and somewhat slower growth in large developing economies, the South African economy has struggled to achieve growth rates much above 2%. The economy grew by 2.5% in 2012 but is expected to slow to 2.1% in 2013.

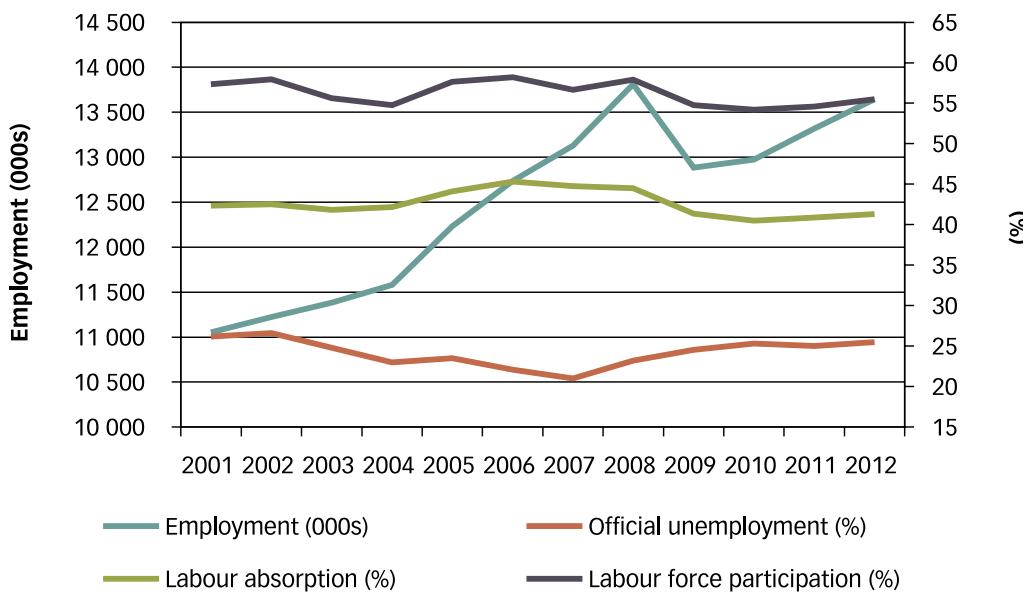
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² In 2009, a New Growth Path (NGP) was also introduced that focused on the micro-economy and creating employment.

³ For example: eliminate poverty and reduce unemployment, improve the quality of school education, deconstruct the spatial patterns of the apartheid system, reduce the level of inequality (as measured by the Gini coefficient) from 0.7 in 2007 to 0.6 in 2030, become a less resource-intensive economy, adopt sustainable development practices, etc.

The country appears to be trapped in a cycle of modest growth, high inequality and record unemployment. The official unemployment rate fell from 26% in 2001 to 21% in 2007 and went on to peak at 25.3% in September 2010. As shown in Figure 1, both the labour absorption rate (the percentage of the working-age population who are employed) and the labour force participation rate (the percentage of those in the labour force as a percentage of working-age adults) declined marginally during 2001–2012. The fall in the labour absorption rate indicates that, despite more people becoming employed during this period, growth in the working-age population has meant that proportionally fewer people were working in 2012 than in 2001.

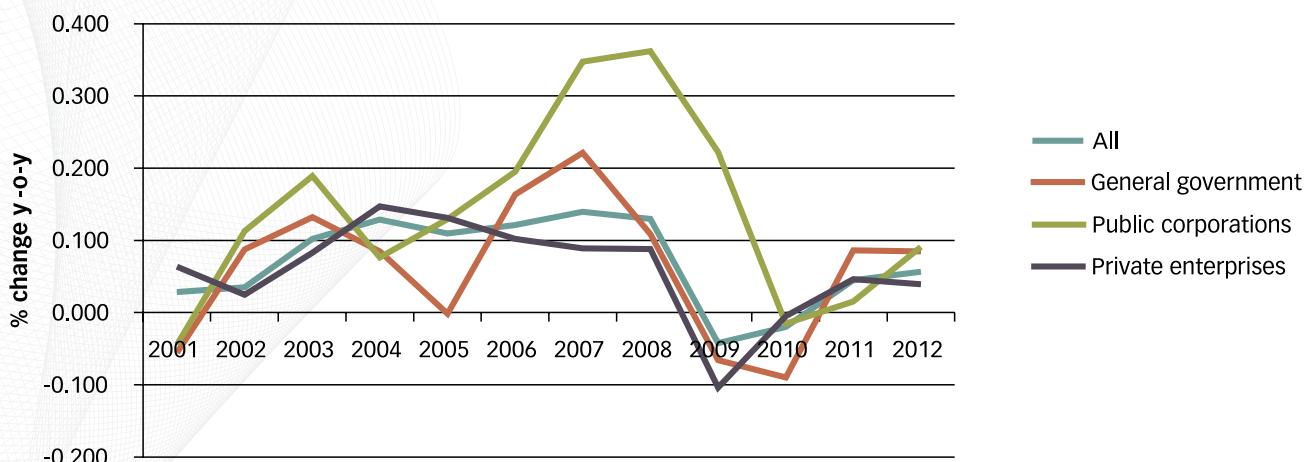
Figure 1: Employment in South Africa



Source: Statistics South Africa's Labour Force Survey (pre-2008) and Quarterly Labour Force Survey (2008 and later). September figures.

During the period 2000 to 2012 the amount of gross fixed capital formation (GFCF) per year, which is a measure of investment, more than doubled in real terms (Figure 2). Although private enterprise GFCF has increased the most in terms of levels, the highest growth rates in GFCF have been by government, especially public corporations. This surge in GFCF was driven by investment by state-owned enterprises such as Eskom, for new power generation capacity, and Transnet, to upgrade and expand rail, port facilities and pipeline infrastructure. As a percentage of total investment, general government investment has remained at around 15% to 16%, whereas public corporations investments recovered from a low of 10% in 2001 to reach around 22% today.

Figure 2: Gross fixed capital formation by category (2005 prices year on year changes)



Source: Computations based on data from South African Reserve Bank (various years)

1.4 The Economy: What Lies Ahead?

Can we expect better in the future? Barring another major global financial or economic crisis, South Africa is likely to continue to recover from the recession and embark on a new expansion. But future growth will almost certainly be slower than in the past. This has not been a normal business cycle for the world economy, one in which recession is usually followed by a rapid return to full capacity and further growth beyond that. It has been one set in motion by a financial crisis.

South Africa also faces further structural changes. For years, manufacturing, once the driver of the economy, has been dwindling as a share of economic output and employment. This is true in most other economies, as factory work continues to migrate to low-cost Asia. Domestic economic growth continues to be hampered by a combination of slow growth in major international economies and problematic local circumstances, including industrial action and an uncertain policy environment affecting key sectors.

- The International Monetary Fund (IMF) has issued forecasts that have seen an upward (instead of downward) revision of economic growth forecasts for the world for the first time in three years. Advanced economies are expected to accelerate growth to 2.2% and 2.3% in 2014 and 2015. But political and economic risks remain, for example the USA fiscal risks and further slowdowns in several major emerging markets. In addition, the possibility that the USA Federal Reserve will slow the rate of monetary policy asset purchases has triggered significant movements in global capital flows.
- The USA is forecast by the IMF to have growth strengthening in 2014, despite the impact of the March 2013 sequester (automatic spending cuts). The USA fiscal and economic outlook in 2014 is dependent on the progress of further budget and fiscal negotiations scheduled for later in the year. The USA Federal Reserve has also signalled that it will begin to slow the pace of asset purchases in the coming months, but the exact timing is dependent on the underlying USA economic outlook and fiscal negotiations. It should also be noted that the existing decline in quantitative easing from \$85 billion to \$75 billion has precipitated a depreciation of the exchange rate, thereby exacerbating the already concerning current account deficit.
- The euro area is a key market for South African exporters. In the case of the Eurozone, following negative growth in 2013, recent positive growth figures for several European countries, augurs well for the maintenance of positive growth in 2014 and 2015, albeit modest, of 1.0% and 1.4% respectively. This followed an improvement in financial market conditions throughout 2013, as policy decisions such as the ongoing effect of the European Central Bank's announcement of Outright Monetary Transactions, alongside a gradual process of macroeconomic rebalancing in the key vulnerable countries, have lessened risks. Despite this improving economic outlook, activity across the euro area remains subdued.

- There are concerns that a slowdown in the growth of the Chinese economy and the switch towards a more consumption- rather than investment-oriented dispensation in that economy will cause the demand for commodities from emerging markets to diminish. Many of these markets have already seen their current account deficits expanding, in part due to declining export performance. Currencies of such economies have been sold off heavily, especially in the case of the so-called “fragile five” (Brazil, India, Indonesia, Turkey and South Africa), whose current account deficits are widest relative to their gross domestic product (GDP). Nonetheless, many of these emerging markets are still growing at rates more than double the pace of advanced economies. Their public debt levels remain at about half or even less of those of advanced economies, while their demographic profiles remain far more conducive to more rapid economic growth in the longer term.
- Further to these international risks, oil prices in 2013 peaked in August at \$117 per barrel in response to instability in the Middle East. However, prices have since fallen back, and at around \$108 per barrel, the 2013 average has been slightly down compared with recent years. The pressures created by rising prices between 2009 and 2011 have largely worked through the system. Nevertheless, risks remain, and a significant commodity price shock has the potential to destabilise the South African recovery.
- The impact of strikes and labour-related violence continues to cause damages to economic growth. The Government should consider establishing levers that can serve to strengthen accountability of both employers and unions in the collective bargaining framework. Such an approach is particularly urgent given that the mining sector, where most of the strikes currently emanate, is also a key foreign exchange earner, which places further pressure on the current account.
- Growth prospects for 2014 and the medium-term will continue to be plagued by structural factors such as inadequate education and skills base. High economic growth needs to be accompanied by improvements in skills and education. South Africa faces enormous pressure to upgrade human capital skills. The country suffers from competitive disadvantage in terms of quality of its human capital, its investment in research and development (R&D), and information and communication technology penetration. South Africa will need to increase investments and quality of spending in education and bolster spending on R&D. These supply-side factors constitute most pressing key long-term challenges confronting South Africa and necessitate consideration of long-term fiscal risk. The Commission is aware that at the basic education level Government has initiated a process to enhance quality improvements whilst at the post school level, the Department of Higher Education has implemented a turnaround strategy in a bid to address the challenges described above. It is hoped that these interventions will be capable of yielding the required outcomes in terms of better and appropriately skilled and competitive human capital.
- Coupled with the perceived inability on the part of the State to deliver fully on implementing its own public investment programmes, the reluctance of the private sector to invest is contributing towards lower-than-anticipated capital investment and overall economic growth. This relative dearth of direct investment has been exacerbated by fears of electricity shortages in many businesses.
- Growth of household consumption expenditure has been slowing down markedly. The continuing fairly sharp depreciation in the value of the Rand over the last 2½ years has resulted in upward pressure on inflation, which has contributed towards both depressing consumer confidence and eroding disposable income. The low rate of employment creation has also dampened consumer spending.
- Recent tightening of monetary policy in the wake of quantitative easing and foreign exchange depreciation is an important domestic risk.

The Commission accepts the government's planning assumptions for economic growth to 2016 contained in the 2014 Budget Review but, beyond that, takes a cautious approach – one dictated by the Commission's view of South Africa's economic capacity and its ability to grow. GDP growth is projected to improve moderately, from the expected 2.1% in 2013 to 3.5% in 2016. Investment (fixed capital formation) and exports are expected to play a significant part in the improved growth, according to government projections. No matter how much demand exists for South Africa's goods and services, there is a limit to the level and growth rate of its potential output, both to what the country can produce and how fast its economy can grow without causing rising inflation. If an economy is already running at full capacity (or potential), there are limits to the speed at which it can continue to expand in the long term. A recession reduces actual output below potential, and, during the recovery period, the economy can exceed the speed limit and grow rapidly until its actual output returns to full capacity. After that, the growth rate must fall back to the slower pace that keeps inflation in check. While real GDP growth is important for fiscal planning, the growth of nominal GDP (which includes the impact of inflation) is even more important. Nominal GDP is crucial because it constitutes government's tax base — the economic activity on which it levies its taxes on income, sales and corporate profits. These assumptions have profound implications for South Africa's fiscal outlook. South Africa will be faced with limited fiscal space alongside international market pressure to speed up consolidation. Limited room to push taxes up further constrains the economy.

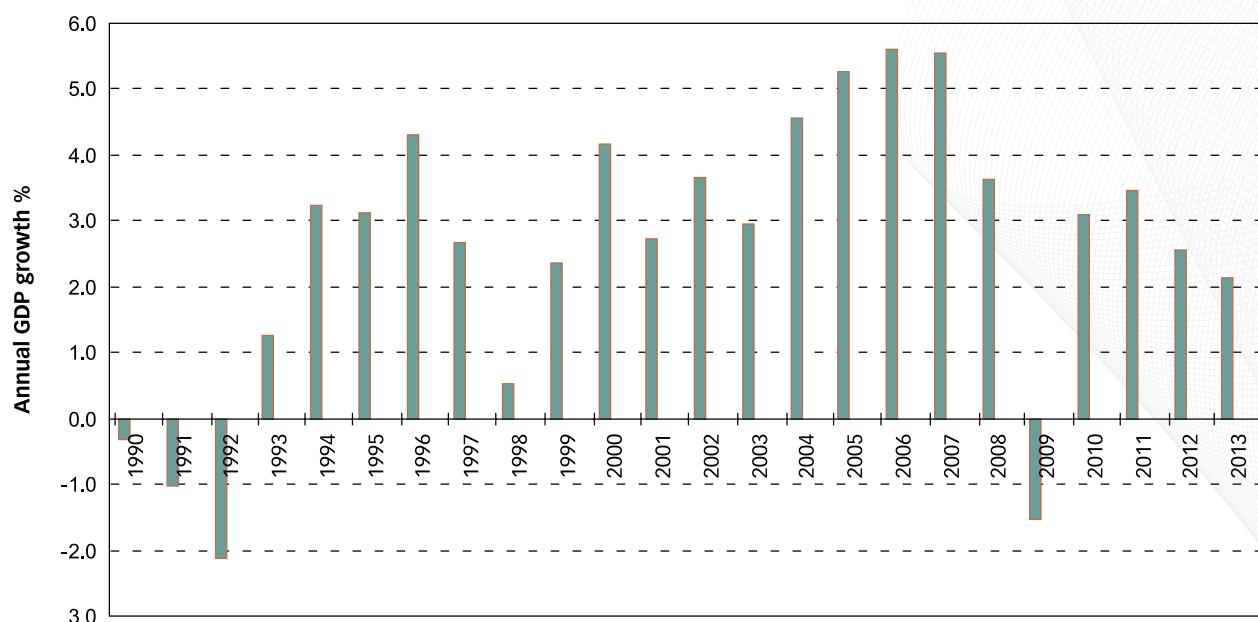
1.5 Revenues, Expenditure and Government Deficit

Figure 3 shows how government fiscal deficits were reined in dramatically from 1998. Deficit levels in 1992 and 1993 were increasing and unsustainable, with the percent-to-GDP ratio reaching almost 7% in 1993. After 1995, following the initial spending programmes of the newly elected government, deficit levels were close to 5%. However, from 1997 to 2000, the deficit level reduced steadily under the stringency of the GEAR framework and the fiscally disciplined approach of the finance minister. Up until 2008, deficits continued to be modest, with slight surpluses in 2001, 2006 and 2007, thanks to high economic growth rates and improved tax-collection efficiency. A marginal deficit was shown in 2008, as international growth worsened, but increased in 2009, as the international economic crisis affected growth and employment rates.

Unlike most developing countries that found themselves unable to engage in countercyclical policy responses to the crisis, South Africa was able to take a countercyclical stance due to prudent fiscal and monetary management during prior periods of growth. The massive expenditure programs earmarked for World Cup 2010 infrastructure provided further stimulus. The result was that sub-national governments were broadly shielded from the crisis and did not have to reduce public spending. Thus, on the surface, the 'burden of austerity' on spheres of government appeared to be not severe. However, what was noteworthy for the distribution of the burden was that the trend of national government grants progressively playing a more prominent role in sub-national government financing was reinforced. Reasons for such trends could range from pressures on existing sub-national taxes due to the crisis or larger increases in transfers from the central government or both.

The countercyclical stance has led to rising budget deficits, resulting in an increase in the public debt/GDP ratio from 23% in 2008 to over 40% in 2013. The wage bill of government expanded during this period. However, since then deficits have scarcely breached 5%, with 4.5% expected in 2013/14, according to the most recent projections. Government's intention is to reduce steadily this deficit level over the next three years, to reach close to 3% (Calitz, 2000; Calitz, Du Plessis and Siebrits, 2013). As the discussion on growth prospects indicated, in this, robust economic growth cannot alone resolve the difficult fiscal challenges.

Figure 3: Government deficits as % of GDP (1990–2013)



Data source:
Computed using data
from SA Reserve Bank
(various issues)

1.6 Poverty and Inequality

South Africa's levels of inequality are among the highest in the world. Despite the priority given to reducing poverty and inequality since 1994, most studies confirm that income poverty continued to increase between 1993 and 2000 and has declined only marginally since 2000 (StatsSA, 2002; Leibbrandt, Levinsohn and McCrary, 2005; Ozler, 2007; Leibbrandt et al., 2010). As a result, the number of people categorised as poor rose by about 3.8 million between 1993 and 2008, with the increase being most striking in urban areas (Leibbrandt et al., 2010). During this period, income inequality has also steadily increased, with the Gini coefficient growing from 0.66 in 1993 to 0.70 in 2008, when the wealthiest 10% of South Africa's population had a mean income around 145 times greater than that of the poorest 10% (Leibbrandt et al., 2010).

Nevertheless, measures of poverty that take account of the depth and severity of poverty show some decline in deprivation. Between 1993 and 2008, the Poverty Gap (which measures the average shortfall of those lying below the poverty line) declined by 12.5% and Poverty Severity (a measure that emphasises the level of deprivation of those furthest from the poverty line) by 13.6% (Leibbrandt et al., 2010). These figures suggest that the wellbeing of the poorest of the poor has improved in the post-apartheid era, and simply estimating the share of the population below a poverty line may underestimate these changes.

Increasing inequality is not an inevitable by-product of growth, especially if the policies pursued are aimed at making growth more inclusive. A strong education system and an efficient labour market help people to participate in productive processes, while redistribution helps society to deal with the dislocation caused by innovation and globalisation. Although South Africa's tax and benefit system is broadly progressive and softens differences in earnings, more could be accomplished by addressing some of the sources of wage inequality, for example through improving mid-level skills.

1.7 Concluding Remarks and Assessment

Over the past 20 years, remarkable progress has been made in reducing poverty and inequality, and in managing the macro-economy overall. However, despite these successes, a number of long-term investment challenges still remain. The most important of these are to:

- invest in more mid-level skills;
- build adequate infrastructure, particularly in transport and energy;
- distribute the fruits of growth more widely: before the 2008 crisis economic growth improved, but inequality has increased substantially.

The following chapters will examine the Commission's recommendations to address these problems.

CHAPTER 2

Public Debt Challenges and the Need for Fiscal Reforms

CHAPTER 2

Public Debt Challenges and the Need for Fiscal Reforms

2.1 Introduction

Public debt refers to debt incurred by governments through issuing government bonds. Governments borrow money for a number of different reasons, such as health, education, defence, infrastructure and research. Some borrowing is for expenditure, while other borrowing is for investment. Governments may borrow in order to run expansionary policies aimed at encouraging economic growth and reducing unemployment, through expanding the money supply, either by raising spending or cutting taxes. Public debt can play a productive role in the economy under certain circumstances (Diamond, 1965). For example, government borrowing can help stimulate the economy during a recession or fund long-term investment projects that will increase economic output in the future. However, governments do not always use debt prudently and may also be reluctant to increase taxes or cut spending during economic booms in order to pay off debt incurred during economic downturns, which leads to growing debt levels over time (Turner, 2002). When governments borrow for current expenditure purposes, this type of borrowing does not yield future economic benefits and can create difficulties when the debt obligation falls due.

Figure 4: Government debt (1990–2013)



⁴ A budget deficit is when government spends more money than it receives

⁵ Government debt can be viewed at gross or net level and for central government alone or consolidated to include other spheres of government as well as public corporations. In this chapter, the net figure (i.e. after deducting cash balances) is used, on a consolidated government basis.

Similar to other countries, the global financial crisis of 2008/09 and recession that followed led to the South African government introducing countercyclical fiscal policy. The result was large budget deficits⁴ and increased government borrowing from capital markets in order to fund these deficits. Figure 4 shows the rapid increase in public debt⁵ as a percentage of GDP following the financial crisis. After increases prior to 1994, public debt rose above 45% from 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. Thereafter, government surpluses and low deficits helped to bring the debt level down, to less than 24% in 2008. With the international crisis of 2008, the percentage to GDP inevitably increased, as deficits were incurred. The debt level exceeded 36% of GDP in 2012 and will continue to increase moderately over the next few years, as deficits continue.

The post-1994 government identified public debt as a major threat to domestic economic recovery, as the country was then struggling to find a balance between growth and debt management. High levels of public debt are of interest to the Financial and Fiscal Commission (the Commission), as analysing debt levels and factors that shape debt sustainability helps to inform the debates about the fiscal framework, in particular national and sub-national budgets and debts.

High levels of public debt can compromise the ability of government to meet other expenditure obligations. For the current fiscal year, the interest payable on government debt is estimated at R100-billion, or close to 10% of government's annual expenditure. But this is in an environment of exceptionally low interest rates, as the South African Reserve Bank (SARB) has adopted a low-rates policy because of the slow economic growth and recovery from the financial crises in major economies. However, if circumstances changed, and the SARB felt compelled to increase interest rates significantly (which could easily occur in two to three years' time), the interest payable on government debt could mean that government would not have enough money to meet other expenditures commitments. For instance, if the interest rate reached 9%, the interest payable on government debt could then move to 12%. As a result of this interest rate change alone, government's debt servicing costs would increase by 50%, to around R150-billion; in other words, R50-billion less would be available for other expenditure that year. Under such circumstances, meeting the financing requirements to translate the ambitious goals of the National Development Plan (NDP) into reality would be difficult, if not impossible.

The way in which South Africa manages its debt also has an impact on the economy. Raising new government debt would place pressure on the domestic bond⁶ market, which could increase the spread of long bonds⁷ relative to short-term financing, placing further strain on long-term debt financing. The situation could easily get worse if the government's actions and policies caused some doubt on its ability to repay its bonds, which would increase the risk portion of bond interest rates and make raising new bonds more difficult. Were the government to implement more aggressive programmes to lower debt levels, this could depress demand and deter investment, which could threaten prospects of meeting the NDP goals.

After providing some background on the public debt market and structure, this chapter discusses the approach used to examine the challenges of high debt levels. Then, the different policy options available to government for lowering debt levels are discussed. After some concluding remarks, the final section present recommendations.

2.2 Overview of the Debt Market

Government debt management has evolved quite substantially since the 1970s, when the need to develop the debt capital market was identified. Before 1990, the state issued debt only three or four times per year. Bonds were issued at par, as and when needed, and typically coincided with bonds maturity dates.⁸ Unlike most developing countries, because of the sanctions in place, South Africa's debt before 1994 was mainly domestic (and this trend continues today). end of apartheid, South Africa was on the verge of a debt crisis and had very bad credit rating and consequently high costs of borrowing.

From 1994, government started to use macroeconomic frameworks to guide debt management strategies. In 1996, a formal bond exchange⁹ was formed, with a view to promote the debt capital market and allow for self-regulation. The main objectives of debt management were to develop the domestic market and promote a balanced maturity profile. After 1999, the focus shifted to reducing the cost of debt to within acceptable risk limits, ensuring government's access to domestic and international financial markets, and diversifying funding instruments. These objectives continue to anchor government's debt management strategy today.

In South Africa, the institution authorised to borrow (the debt-management authority) is National Treasury, which since 2011/12 submits annual reports on public debt management. The debt management agent is the South African Reserve Bank (SARB). The main objective of debt management is to provide government funding, minimise cost, diversify funding instruments and maintain a

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⁶ The South African government borrows money by issuing government bonds and selling them to private investors overseas or domestic. A bond is a loan or an IOU issued by a corporation, government or governmental agency to cover money the bondholder has lent. A bond is a debt security (i.e. debt instrument that can be bought or sold between two parties).

⁷ Long bonds have a maturity date of more than 15 years.

⁸ At par (or the face or principal value) is how much the bondholder will receive at maturity. Maturity refers to the length of time before the par value is returned to the bondholder and can a few months, 50 years or more. A R1000 bond at par will be worth R1000 at maturity.

⁹ The Bond Exchange of South Africa (BESA).

¹⁰ A short-term debt obligation backed by the government.

balanced maturity structure. South Africa has quite a diversified and liquid debt market with a sophisticated bond market at its apex. Domestic short-term borrowing consists of Treasury bills¹⁰ and cash borrowings from the broader public sector through the Corporation for Public Deposits (CPD).

Up until the 1990s, rising debt-to-GDP ratios made government more aware of the costs of managing public debt. Debt management concerns then abated somewhat, with the advent of low inflation and reduced public debt. However, looking forward, debt managers will face different challenges as debt to-GDP ratios have begun to rise again. Thus an emphasis needs to be on improving the efficiency of debt management techniques, which has the potential to produce budgetary savings¹¹.

Table 1 shows the breakdown of government debt. As at March 2013, Treasury bills accounted for 12.6% of government debt and bonds issued in the local bond market (fixed-rate and inflation-linked bonds) for 76% of government debt. Foreign debt made up 9.1% of the total, most of which was in the form of foreign currency bonds.

Table 1: Government debt breakdown (2012/13)

R million	Mar-12	% of total	Mar-13	% of total
Total domestic debt	1 070 940	90.2	1 241 123	90.9
Fixed-rate bonds	668 300	563	793 358	58.1
Inflation-linked bonds	220 973	18.6	244 496	17.9
T-bills	155 159	13.1	171 985	12.6
Corporation for Public Deposits	13 256	1.1	18 985	1.4
Retail savings bonds	12 222	1.0	11 269	0.8
Zero-coupon bonds	984	0.1	984	0.1
Other loans	46	-	46	-
Total foreign debt	116 851	9.8	124 555	9.1
Foreign currency bonds	98 151	8.3	106 588	7.8
Other foreign loans	18 700	1.6	17 967	1.3
Total government debt	1 187 791	100	1 365 678	100

Source: National Treasury

In 2012, the public sector bond issued was double the total share capital raised on the Johannesburg Stock Exchange. New issues of public sector bonds totalled R172.7-billion, compared to total share capital raised of R78.1-billion. In the first seven months of 2013, new government bond issues came to R96-billion, compared with private sector corporate bond issues of only R18.1-billion. Foreign debt outstanding by the national government as at end-June 2013 was R117.6-billion, of which R99.7-billion was marketable debt. Taking the marketable debt to be largely bonds, this gives a ratio of foreign to domestic bonds of approximately 9.2%. This ratio is low by international standards, but the concern is that it is increasing.

Table 2 compares the make-up of national government funding in Q3 2012 with that of Q3 2013. The government cash-flow deficit has more than doubled, from R23.9-billion to R63.5-billion, while net borrowing requirement has almost tripled.

¹¹ As the proportion of foreign debt rises, the country will increasingly have to consider the foreign exchange market and risk. The weak trade balance on the current account may place further pressure on debt management.



Table 2: National government financing (2013/14)

R billion	Originally budgeted 2013/14 ¹	Actual Apr-Jun 2013	Actual Apr-Jun 2012
Item or Instrument			
Deficit	179.2	63.5 ¹	23.9 ²
Plus: Extraordinary payments	0.9	0.0	1.4
Cost/profit on revaluation of foreign debt at redemption ³	3.2	4.7	-2.9
Less: Extraordinary receipts	0.3	3.8	0.1
Net borrowing requirement	183.1	64.4	22.2
Treasury bills	23.0	20.2	11.4
Domestic government bonds	145.4	36.1	34.0
Foreign bonds and loans	-1.1	-11.8	-12.1
Change in available cash balances ⁴	15.8	19.9	-11.0
Total net financing ⁵	183.1	64.4	22.2

Source: SARB (2013)

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¹ Budget Review 2013

² Cash-flow deficit

³ Cost + Profit –

⁴ Increase – Decrease +

⁵ Components may not add up to totals due to rounding

2.3 Methodology and Simulations

Persistent high levels of public debt can create problems. Governments can use five major policy tools to address high debt levels: fiscal consolidation, debt restructuring, inflation, growth, and financial repression. This chapter studies the potential impact of public debt reduction policies on the South African economy using IFGEM, a dynamic financial general equilibrium model developed at the Commission. The core data required to implement this model can be obtained from a social accounting matrix (SAM), a national accounting matrix and a flow of funds matrix for 2013. Information on debt stocks for government and other agents (obtained from the SARB) were added in the SAM. Using IFGEM, simulations were run to compare four scenarios with the Business As Usual (BAU) scenario:

- *Fiscal consolidation*: tax increases and/or government spending cuts are used to reduce government deficits and lower government borrowing.
- *Debt restructuring*: the debt contract is restructured to lower payments for the borrower, by (for example) lowering the interest rate, extending the repayment period (maturity of the loan) or lowering the outstanding balance (principal) of the loan.
- *Economic growth*: increasing growth lowers debt relative to GDP, through reforms such as increasing the flexibility of labour markets in order to spur growth.
- *Financial repression*: government policies encourage or force domestic investors to buy government bonds at artificially low interest rates, as (all else being equal) debt-to-GDP falls when real interest rates (the interest rate adjusted for inflation) are negative.
- *Inflation*: inflation is used to reduce the ‘real’ value of the debt, meaning the value of the debt in terms of goods and services. If there is inflation, the nominal or face value of the loan purchases fewer goods and services than at the time the debt contract was agreed upon.

The following sections discuss the results of the simulations.

2.4 Fiscal Consolidation Scenario

Following the financial crisis, fiscal consolidation (using tax increases or spending cuts to reduce government debt and borrowing) was the primary policy response to high public debt levels. Several advanced economies also announced austerity measures, with some, such as Greece, Ireland and Portugal, doing so in response to market pressures. For South Africa, fiscal consolidation was announced ahead of changes in investor sentiment, when in the 2013 Medium Term Budget Policy Statement (MTBPS) government pledged to stabilise or reduce government debt-to-GDP ratios by 2016/17.

The impact of fiscal consolidation on real GDP was found to be minimal, as Figure 5 shows. The policy implication is that substantial consolidation will be required for there to be a noticeable impact on the evolution of debt.

Figure 5: Impact on real GDP following fiscal consolidation

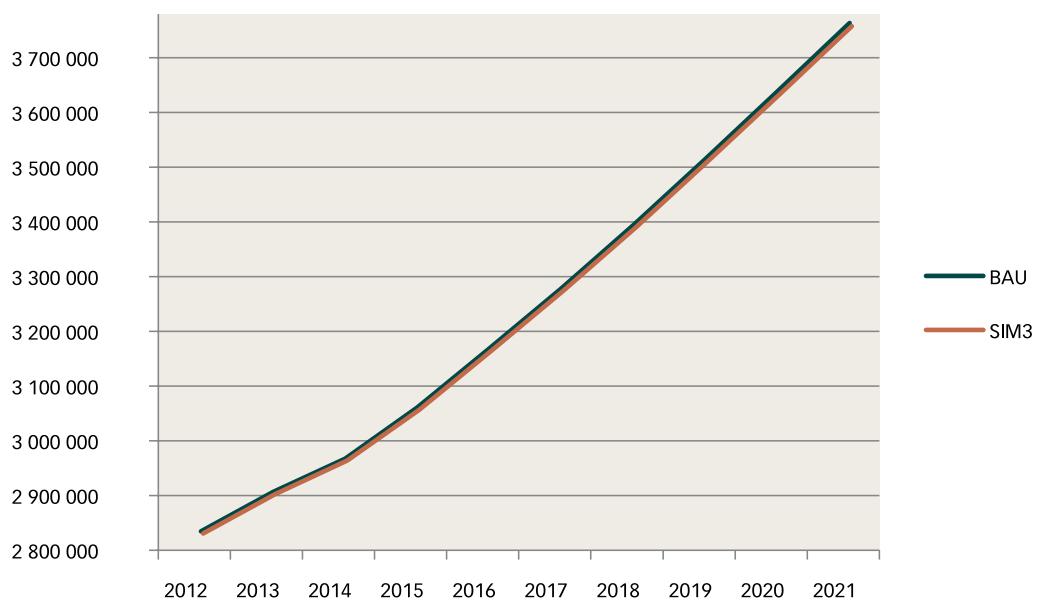
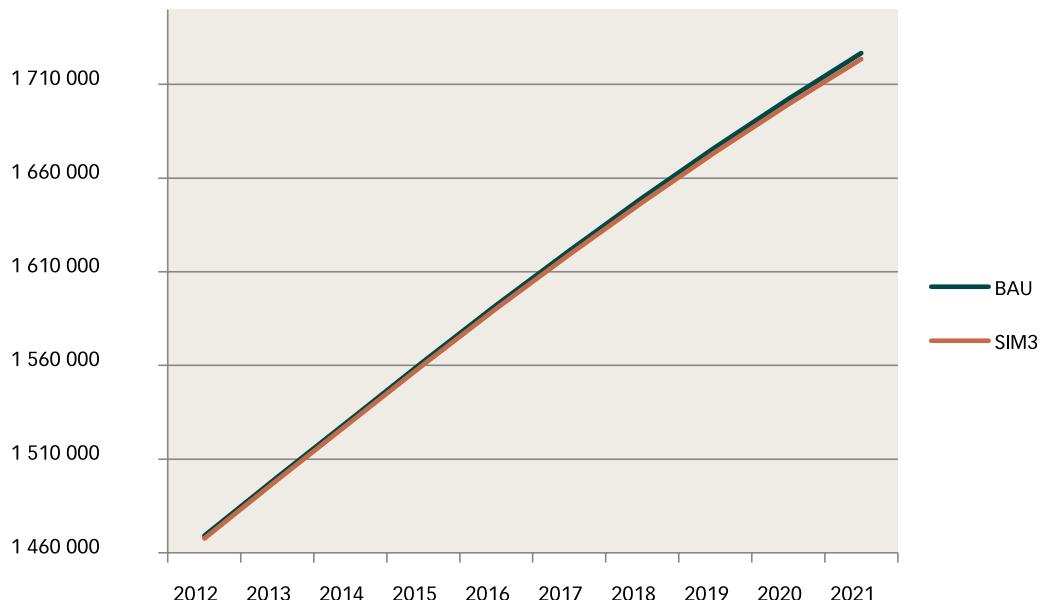


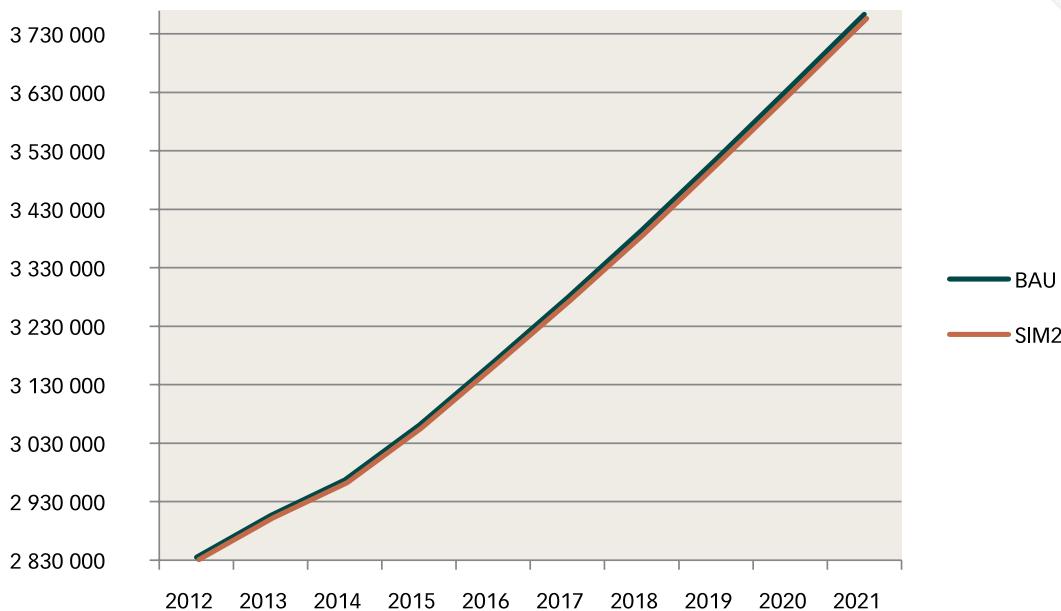
Figure 6: Impact on the public debt following fiscal consolidation



Taxing firms is another way to implement consolidation. Increasing the corporate tax rate by 1% would have direct impacts on the firms (reducing their savings and the transfers they make to other agents) but will also increase government's total income. The increase in government income has a strong and positive impact on government savings, as government spending is kept constant. The government reduces its current deficit throughout the period, which has a positive impact on the reduction of the public debt as shown in Figure 6.

The impact on real GDP (of increasing the tax rate on firms by 1%) is slightly higher than in the BAU scenario.

Figure 7: Impact on real GDP following increase tax rate on firms



These two scenarios show that fiscal consolidation through taxing firms could reduce debt by directly targeting the cause of high debt levels – government tax revenue that is too low. The results also show that fiscal consolidation can increase economic growth, which is probably because credible consolidation measures increase investor confidence in the government and lower the interest rate charged by investors on government bonds. If lower borrowing costs for the government also reduce interest rates for consumers and firms, consumer spending and investment may increase, expanding economic output.

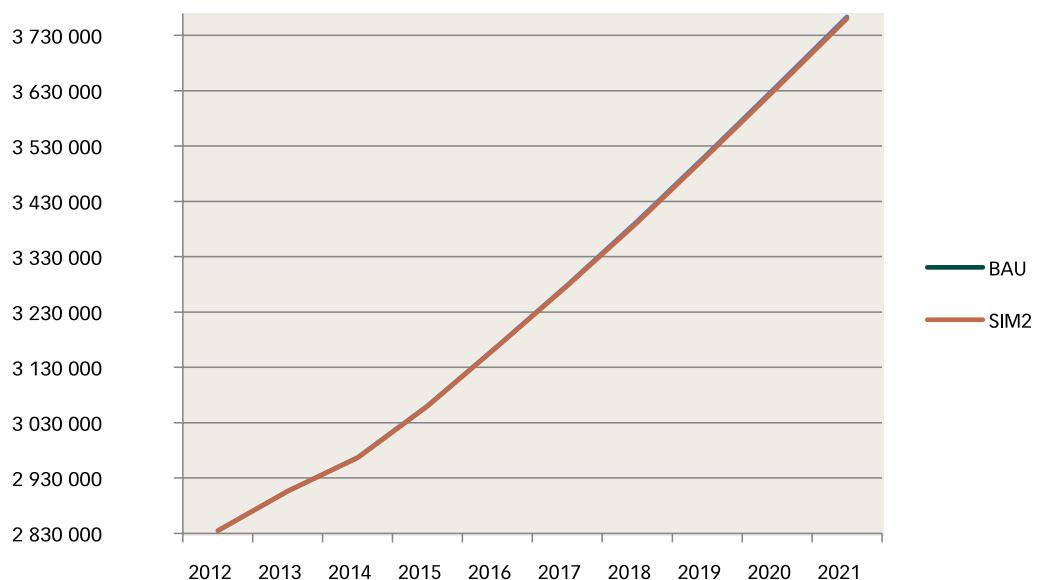
However, the results also show that these programmes can be costly to implement, especially using indirect taxation. They reduce aggregate demand in the short term, causing the economy to contract and unemployment to rise. Also, if economic output falls at a faster rate than the debt, the debt-to-GDP ratio can actually rise, failing to address the government's debt burden effectively.

2.5 Debt Restructuring Scenario

Debt restructuring refers to reorganising a debt that has become too large and burdensome for the borrower to manage. It can refer to providing more lenient terms about how a debt will be repaid, such as extending the time period over which the debt will be repaid (the maturity of the loan) or lowering the interest rate. It can also refer to a reduction in (or forgiveness of some of) the outstanding balance or principal. In either case, the current owners of the debt will get less than they were originally promised. Debt restructuring can help governments to reduce their debt burden while limiting the consolidation measures imposed on their citizens. It pushes the cost of debt reduction onto private creditors, who, some argue, should bear the consequences of taking on higher risk in exchange for greater potential reward.

This shock describes a world where government restructures its debt. In the simulation, the interest rate decreases by 2% from 2014–2017 and by 5% until 2021. The decrease in the interest rate will have different impacts on the economy, as the channels of transmission are different from the previous scenario. As expected, firms' income is decreasing, while their savings are decreasing even more due to the restructuring. This decrease in firms' savings will have (all other things being equal) a negative impact on private investment. Households' income also slightly decreases throughout the period. Finally, the impact on real GDP is slightly lower than in the business as usual (BAU) scenario.

Figure 8: Impact on real GDP following debt restructuring



As these results show, restructuring is not entirely a desirable option for lowering debt burdens in South Africa. The main practical reason is because a large share of government debt is held domestically. Imposing losses on private creditors instead of implementing consolidation measures may result in domestic repercussions for the government. After restructuring its debt, government may have trouble borrowing from capital markets and so would need to balance the budget more quickly than if no restructuring had occurred. The logistics of debt restructuring can also be difficult. Although recent changes in the legal processes related to sovereign bonds have helped streamline restructuring, organising and negotiating with potentially thousands of individual bondholders can be cumbersome and time-consuming. Finally, debt restructuring can increase investor anxiety including institutional investors such as pension funds which are heavily invested in government bond and affect other countries, given that South Africa is the largest economy in Southern and Eastern Africa.

International experience illustrates how, in the face of severe economic shocks, commitment to fiscal consolidation can support sustained debt reduction over the medium term. After a severe financial crisis in the early 1990s, Sweden faced large-scale bank failures and currency depreciation, as well as a sharp interest rate shock. With a budget deficit peaking at 11.4% of GDP in 1993 and, just three years later, general government gross debt peaking at 73% of GDP, the Swedish government committed itself to restore public finances to a long-term sustainable position*. A key element of this strategy was the reform of the fiscal framework, including the incremental introduction of a surplus target and rolling expenditure ceilings. These reforms resulted in the Swedish debt-to-GDP ratio reducing by over a third in the following decade. By 2018, the forecast is that Swedish public sector gross debt (as a percentage of GDP) will have reduced by over half from its peak.

Similarly in New Zealand, with debt levels spiralling and projections of unsustainable increases, the government passed the Fiscal Responsibility Act in 1994. In broad terms the Act defined principles of responsible and prudent fiscal management underpinned by specific fiscal targets. The framework formed the basis of New Zealand's fiscal policy for almost two decades. According to the IMF, within 10 years, gross debt levels as a percentage of GDP had reduced by half from their peak of 61.5% in 1992*.

Canada also faced rising debt levels in the early 1990s, with increased risk premiums on Canadian bonds that fuelled rises in interest rates. This experience established a public consensus on the importance of restoring the debt levels to a sustainable position in the long term. The government introduced a policy of running a balanced budget which, assisted by the improved macroeconomic outlook, contributed to Canadian debt levels reducing within a decade by around a third, from their peak of 102%*.

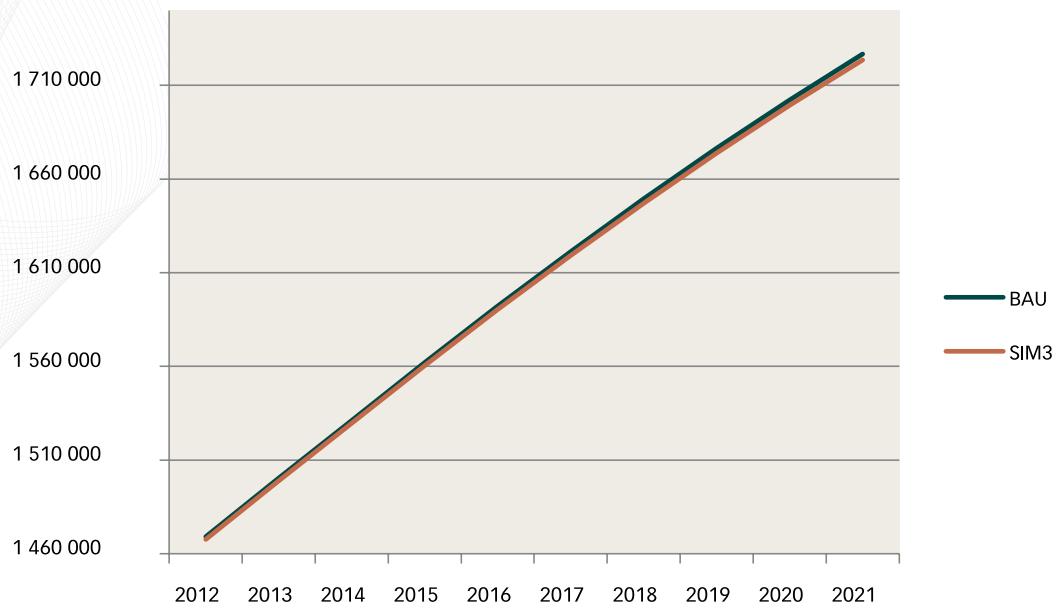
*'World Economic Outlook' database, IMF, October 2013. Examples based on a general government gross debt basis.

2.6 Economic Growth Scenario

Economic growth allows governments to lower the size of their debt relative to the size of their economy. It can also lead to lower levels of government spending, increased tax revenues and a lower rand value of public debt. In the short run, economic stabilisation is a necessary condition for sustained economic growth. Growth can be stimulated by pursuing expansionary fiscal and monetary policies or by pursuing structural reforms at the microeconomic level. However, expansionary fiscal policies lead to more debt, and 'easy' monetary policies (such as lowering interest rates) may not be effective if firms and households are unwilling to borrow in order to increase investment and consumption. At the microeconomic level, growth can be supported by a number of structural reforms that can increase the competitiveness of industries in the economy. Examples include removing barriers to labour mobility, privatising state-owned companies, and further liberalising trade policy.

Running this simulation on the model, it can be seen that government reduces its current deficit throughout the period, and this has a positive impact on the reduction of the public debt as shown Figure 9.

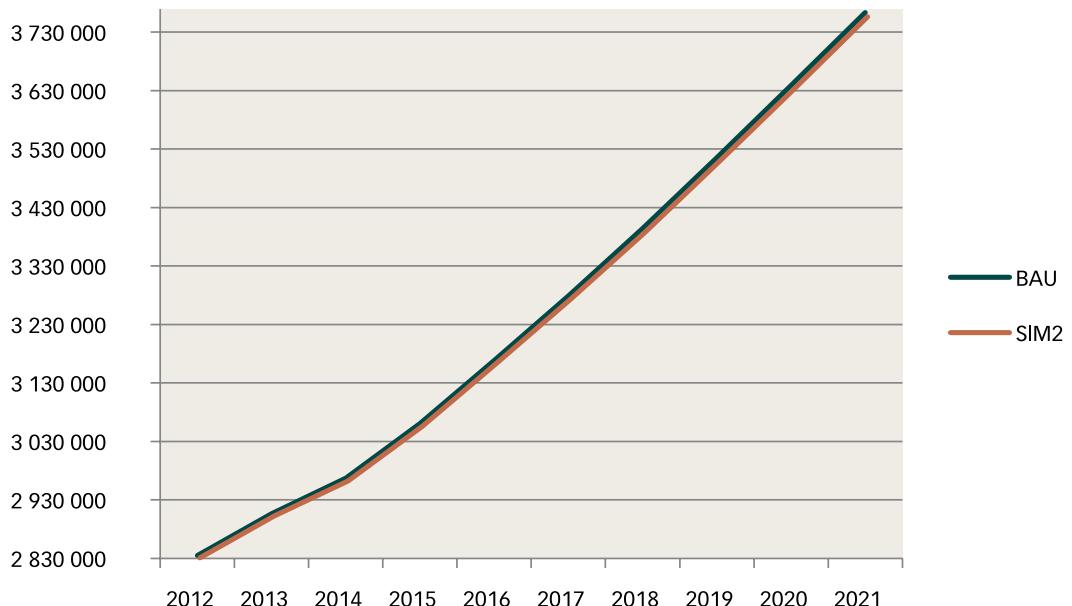
Figure 9: Impact on the public debt of economic growth



2.7 Financial Repression Scenario

Some economists argue that governments can also use financial repression to lower debt levels (Buiter and Rahbari, 2012)¹³. Financial repression generally refers to the use of government policies to encourage or force domestic investors to buy government bonds at artificially low interest rates. Specifically, government sells bonds at interest rates below the rate of inflation, meaning that the real interest rate (the interest rate adjusted for inflation) is negative. All else being equal, extending loans with negative real interest rates results in falling debt-to-GDP ratios over time. In order to get investors to buy these bonds, governments use a host of policies, such as restricting capital outflows, in order to create a captive domestic audience for these bonds. For example, governments may require pension funds to hold government bonds. Figure 10 shows the impact of this scenario on economic growth.

Figure 10: Impact on real GDP of financial repression



Several advanced economies used financial repression to lower public debt levels following World War II. Real interest rates in advanced countries were negative roughly half the time between 1945 and 1980. According to some estimates, financial repression in the United States and United Kingdom helped reduce debt levels by 3%–4% of GDP a year, or 30% to 40% each decade between the end of World War II and the 1970s.

Financial repression may be attractive because it avoids many of the pitfalls of the other policy options for lowering debt levels. For example, it avoids politically painful austerity measures, is arguably less disruptive than debt restructuring, does not require introducing surprise inflation into the economy and is a more certain policy option than growth. However, after 20 years of financial liberalisation, it would be technically difficult for the South African government to return to the capital controls necessary to embark on a financial repression policy. Policy-makers might also have trouble imposing the controls before capital flight takes place, while the controls could damage a country's ability to attract foreign investment. It could also precipitate credit rating downgrading which would increase risk premia. Financial repression may also be politically difficult, as investors would probably oppose policies that restrict their investment opportunities or require them to buy government bonds at artificially low interest rates.

2.8 Inflation Scenario

Because most public debt is denominated in domestic currency, the government can use inflation to reduce the real value of the debt (Barro, 1974; 1997). This is frequently referred to as a government "running the printing presses" in order to create the money it needs to repay creditors, although the government can use other ways to create inflation in the economy (Wilcox, 1989). Many economists view this policy as an effective default on the debt because, even if creditors are repaid, the value of goods and services they can purchase is significantly lower than they expected when they extended the loan to the government (Bernheim, 1989).

Inflation allows government to repay its debt without having to implement austerity measures and can be less complicated than a debt restructuring. However, using inflation as part of a debt management strategy can be problematic. Investors must not expect the inflation or else they will price in the risk of inflation through higher interest rates. Even if the government is able to introduce surprise inflation, it will raise the government's borrowing costs in the future. Inflation can also have a number of adverse consequences, including wiping out the value of savings, creating shortages of goods and reducing future investment by creating uncertainty in the economy. Governments may also have trouble limiting the amount of inflation introduced into the economy: one round of inflation may raise expectations about future inflation, which in turn could lead to more inflation. In addition, using inflation to lower the real value of the debt assumes the cooperation of the SARB, which is not the case because the SARB sets policies independently of the government. Thus we do not proceed to run this scenario.

2.9 Conclusion

Over the past two decades, South Africa's fiscal record has been one of small deficits that have been more than offset by sporadic episodes of small surpluses. The global economic and financial crisis resulted in large deficits that led to the public debt/GDP ratio increasing from 23% in 2008 to over 40% in 2013. Carrying debt requires spending in the form of interest payments on outstanding bonds and other obligations. Interest rates have been low in recent years across most of the globe and, with a sound record in debt management, South Africa has been able to borrow cheaply. The government's interest payments have been trading at around their lowest levels in the past 20 years, both in relation to GDP and to the country's total spending. The danger here is obvious. As interest rates rise to more normal levels, so will the cost of servicing the growing debt, diverting rands away from public programmes.

By current international standards, South Africa's debt is relatively small. Should the global economy turn nasty once again, any deterioration in investor confidence could be remarkably swift. In a world already awash with government debt, South Africans should not assume that investors will always stand ready to buy the government bonds needed to finance new debt without asking for higher interest rates to compensate them for the accompanying risks.

Simulations were run to assess the potential impact of the different public debt reduction scenarios on the South African economy. The impact of fiscal consolidation on investment and real GDP was found to be quite small but show that government would increase its domestic borrowing, which would hamper private investment, leading to a decrease in GDP in the long run. The economic growth scenario is quite interesting, as debt would reduce in the long run and real GDP would decrease slightly. This suggests that it is feasible to decrease public debt without slowing down GDP and therefore future growth.

Government can benefit from these simulations to inform actions/decisions needed to resolve the country's fiscal dilemma, while protecting to the greatest degree possible the public programmes on which South Africans rely. High-debt governments are always vulnerable to the whims and demands of the financial markets from which they have borrowed, and governments in this position can be forced to take draconian measures to keep their lenders happy. In contrast, low-debt governments have much more flexibility to set their own priorities — ones that meet the needs of their citizens.

2.6 Recommendations

With respect to keeping a check on the deficit and public debt in ways that contribute towards fiscal sustainability and socio-economic development, the Commission recommends that:

1. Government avoids setting rigid public debt targets. While keeping debt low has historically been considered desirable, borrowing is a valid and appropriate option available to government to help finance ongoing infrastructure and developmental requirements consistent with realising the aspirations of the NDP. This presumes that debt management continues to have the objective of raising the required funding at the lowest possible cost within a given risk tolerance.
2. Government does not resort simply to cutting costs to reduce public debt. The need to restrain spending should be an opportunity to reform programmes and service delivery. Simple cost-cutting may be effective in achieving deficit reduction targets but does not encourage longer-run fiscal stability or allow for reforms that will generate more value for money spent.
3. Government avoids across-the-board cuts or expenditure ceilings as a means of debt control. Such blunt tools treat valuable, efficiently run programmes and outdated, poorly managed programmes in the same way. Spending should be aligned with government priorities, to ensure adequately funding of high-priority initiatives and elimination or substantial reduction of lower-priority programmes.

CHAPTER 3

Social Programmes and the Need for Reform

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3.1 Introduction

Social programmes provide a safety net for some of South Africa's most vulnerable citizens. The comprehensive social security programme has two separate but interrelated components: social assistance (the grant system through which the state provides basic minimum protection to relieve poverty) and social insurance, or the mandatory employee contribution schemes. Government is responsible for three primary social insurance mechanisms: the Unemployment Insurance Fund (UIF), the Compensation Fund and the Road Accident Fund (National Treasury, 2010). The purpose of the social security programme is to alleviate and reduce poverty, vulnerability, social exclusion and inequality. Social assistance is provided in the form of social grants (for adults who are 18 years and older), children's grants (for those younger than 18 years) and the social relief of distress grant (temporary assistance at times of crisis). Social grants for adults are: old age grant, disability grant, war veterans' grant and grant-in aid. Social grants targeted at children are: care-dependency grant (CDG), foster child grant (FCG) and child support grant (CSG). The amount spent on the old age grant, CDG, disability grant and FCG together is equivalent to about 62% (R90-billion) of the total social protection budget.

Social assistance provides the most basic income and employment supports to the impoverished and people with disabilities. Child protection services, delivered through a network of non-governmental organisations (NGOs) and provincial welfare departments keep children safe and healthy. And developmental services support local programmes and services that promote inclusion and involvement of citizens with a developmental disability. In 2012/13, about 16 million people, or 31% of South Africa's population, received a social grant (National Treasury, 2013), compared to 2.5 million beneficiaries in 1998. More than half of the country's households benefit from some form of social assistance, with 22% relying on it as a main source of income. A total of R158-billion (or 9% of the government's budget in 2012) was invested in social assistance programmes. Despite the valuable services that social programmes provide, the theme of this year's Submission requires their fiscal impact to be considered.

To fully grasp the fiscal challenge, the distinction between entitlement and discretionary social programmes needs to be made. Most spending is carried out through mandated and entitlement-based programmes, meaning benefits or service levels are set by law. As shown above, these benefits and services, such as social assistance, are large. Other programmes are discretionary in nature and not entitlement-based, and so clients who qualify for these services are not guaranteed to receive them right away. Such programmes include support for child and youth mental health, developmental services, child care subsidies and early childhood development. The distinction between entitlement-based and discretionary programmes is important in the fiscal context. When demand for entitlement-based programmes rises (for example, when assistance caseloads increase), so too does funding because clients are entitled to those benefits. This is not the case for discretionary programmes: when demand outstrips supply, the result is a waiting list or other forms of rationing.

Managing expenditures, particularly for entitlement-based programmes, means the government will have to achieve more by operating more efficiently. Programme design and delivery will need to be integrated and aligned across different government departments and delivery agents. Various levels of government will need to work together to determine the most efficient ways to provide services for those most in need. Attaining this integration and transformation will require the government to evaluate and align its policies and service delivery methods from a client-based perspective. When vulnerable people need support, they and their families do not care which level of government or government department is responsible for providing that support – they just want help, which could be more accessible and more effectively planned and delivered.

This chapter looks at what the state of the South African economy would be without beneficiaries of the social grant system ('counterfactual scenario'), in order to gain insight into the biases that social grants introduce into the South African economy and to assess their overall impact. Previous studies have examined the impact of social assistance in South Africa but have not looked at the value/benefit to society at large. In other words, whether government is making best use of its money according to a well-defined set of goals. This becomes increasingly important in an economy where funding is scarce and limited resources need to be used efficiently to alleviate poverty and aid economic growth. In other words, balancing fiscal sustainability with socio-economic impact. After a literature review, the methodology is examined and the findings discussed. The concluding remarks, summarising the key findings are followed by some recommendations.

3.2 Impact of Social Grants

Over the past 15 years, a "quiet revolution" has seen governments in the developing world invest in increasingly large-scale cash transfer programmes, which can help to reduce inequality and the depth of poverty, and contribute to better school enrolment and health (DFID, 2011). Cash transfers can lead to livelihood protection (maintenance of minimum living standards), especially when people face crises, and livelihood promotion, or sustainable improvement of living standards in the longer term (Devereux, 2002). The evidence is clear that social cash transfers have an impact on poverty. A study commissioned by the national Department of Social Development (DSD) found that "South Africa's system of social security successfully reduces poverty, regardless of which methodology is used to quantify the impact measure or identify the poverty line" (Samson et al., 2004: 1). The poorest households¹⁴ in South Africa receive two-thirds of their income from social grants, mainly child grants – the CSG, FCG and CDG combined (Woolard, Harttgen and Klasen, 2010). The CSG reaches some of the poorest households and so can alleviate poverty (Haarmann, 2000), and the probability of a child going hungry falls by 8–14% for each CSG that a household receives (Williams, 2007). Extending the eligibility age of CSG recipients would have the greatest potential for reducing poverty (Samson et al., 2004). However, "the current support, both in terms of coverage and quality" would not be sufficient to break the poverty cycle (Haarmann, 2000: 19). An analysis of other forms of social assistance found that a basic income grant would effectively reduce poverty across the various household types (Haarmann, 2000).

Although the Human Sciences Research Council's *South African Social Attitudes Survey* revealed that the poor prefer labour-market income to that from grants (Noble, Ntshongwana and Surender, 2008), social grants do inject significant resources into poor households and can have both negative and positive impacts on working-age individuals' incentive to work (Williams, 2007). Receipt of the old age grant lowers the labour market participation of working-age adults (Bertrand, Mullainathan and Miller, 2003), but only for male household members, especially if the grant recipient is female (Posel, Fairburn and Lund, 2006). The grant system influences labour supply through direct and induced effects on retirement decisions, household formation and job search activities (Van der Berg and Siebrits, 2010). Direct effects, covering incentives actually faced by recipients, are largely influenced by the means test that discourages the elderly people from working after reaching eligibility age (by imposing an effective marginal tax rate of 50% on non-pension incomes). Disability grants are also subject to means test and reveal similar discouraging effects. The situation is worsened by the high levels of unemployment and other labour-market disadvantages faced by elderly and disabled South Africans, while many members of these groups have limited skills and reside in rural areas where job opportunities are scarce (Van der Berg and Siebrits, 2010). The small difference between the disability grant and available labour market wages implies little incentive for persons with disabilities to seek or take up paid work, especially casual and temporary jobs (Johannsmeier, 2007).

Mothers in their twenties who receive grants (on behalf of their children) show on average a 15% increase in employment probability and a 9% increase in labour force participation (Eyal and Woolard, 2011). Williams (2007) found an increase of 7–14% in broad labour force participation of mothers with a child receiving a CSG, with the most positive impact being among mothers and household heads that did not complete their matric and mothers who lived in informal residences. Although the study did not find that the CSG has a negative impact on labour supply, it suggested that further research is needed into the complex dynamics between social grants, poverty, and reproductive and remunerated labour (Williams, 2007).

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¹⁴ Households were divided into five equal groups ('quintiles') based on income, with the bottom quintile being the poorest households.

Social grants are beneficial to society but are often diverted into areas other than their intended purpose given the conditions faced by the poor. The social grant income supports not only the qualifying recipient (child or adult) but also the entire household, improving the welfare of recipients and the households in which they reside (SPII, 2012). The majority of the studies in South Africa concur that CSG promotes school attendance among beneficiary children and leads to higher school enrolment rates of girls (Case, Hosegood and Lundi, 2005; Budlender and Woolard, 2006; Leibbrandt et al., 2010; SPII, 2012). Yamauchi (2005) showed that grant-financed nutritional improvements led to positive educational outcomes for children; for example reducing repetition in school and allowing for early schooling. The exception is a study of children aged between seven and 13 years by the Community Agency for Social Enquiry (CASE) that found no major difference between children receiving the grant and children not receiving the grant (CASE, 2008). This may in part be explained by the fact that South Africa has already high levels of enrolment and attendance rates.

The CSG also has a positive effect on childhood development. Using the 1998 KwaZulu-Natal Income Dynamics Study (KIDS) data to measure the nutritional impact of the CSG received in the first three years of a child's life, Agüero, Carter and Woolard (2007) found that children who benefit from the CSG score better height-for-age. DSD et al. (2012) also observed that receiving the CSG in early life improves height-for-age scores for children whose mothers attended school beyond grade eight. A study by Booyse (2004) observed that the child support, disability and foster care grants have the potential to mitigate the impact of HIV/AIDS, reducing morbidity or mortality for households affected by the pandemic.

In summary, previous studies generally indicate that social grants, and the CSG in particular, have positive impacts on recipients and households, leading to improved health, nutrition and education. However, the results for grants such as the old age grant and disability grant are mixed, and research into the combined grants is insufficient.

3.3 Methodology

The actual performance of the South African economy was compared to the results of a counterfactual scenario (i.e. what the state of the South African economy would be without beneficiaries of the social grant system), in order to gain insight into the biases that the social grant introduces into the South African economy and to assess its overall impact.

The analytical framework is described briefly below and depicted in Figure 11.

Step 1: A nationally representative sample of *beneficiary* (social grant recipients) and *non-beneficiary* (receive no grants) households was developed ('real sample').

Step 2: The impact of the social programme was estimated by modelling the probability of being in the programme, given the observed characteristics of the household.

Step 3: Using the probability (or propensity) score from Step 2, the simulation variable for the households in the counterfactual scenario were identified.

Step 4: The counterfactual sample was built – a nationally representative sample of non-beneficiary households.

Step 5: The simulation scenario compares the outcomes of the variables (identified in Step 3) from the real sample (Step 1) and the counterfactual sample (Step 4). It was used as input in the models (Step 6).

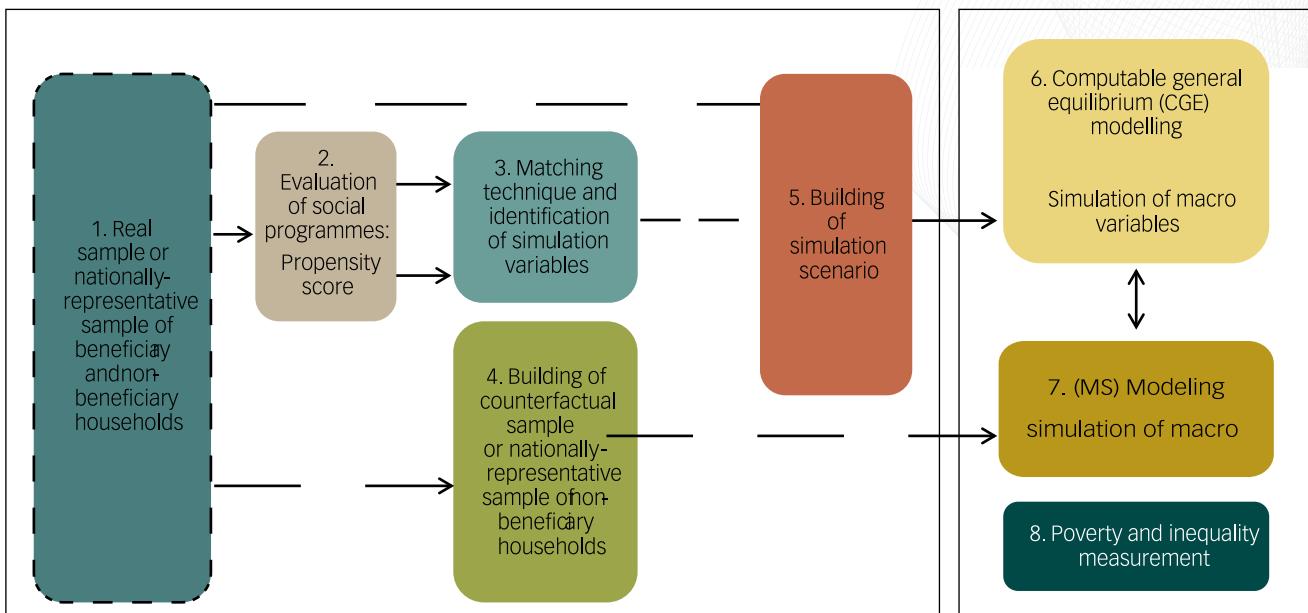
Step 6: Various computer models are run.

The outcomes of the beneficiary group and the non-beneficiary group were compared for pre-selected¹⁵ variables of interest, with the aim of providing evidence that the social grants programme affects these variables. Only variables that show a statistically significant effect are used in the stimulation.

¹⁵ The variables are pre-selected according to the objective of the analysis. We have selected the labour supply and consumption variables as we are interested in the short-term impact of the social grant programme.

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Figure 11: Simplified presentation of the analytical framework



3.4 Effects of Social Grants on Consumption and Labour Supply

Statistically significant differences in per capita spending were found for all consumption items except "household", and "education" (Table 3). This means that social grant beneficiary households spend less per capita than non-beneficiary households on all consumption items apart from education and household. The per capita spending on these two items showed no difference between beneficiary and non-beneficiary households.

Table 3: Effect on consumption spending

Consumption Item	Average monthly per capita consumption(in Rand)
Food products	-50.3***
Personal	-58.1***
Transport services	-67.0***
Energy and water	-20.2***
Household	-23.4
Clothes and footwear	-12.6**
Health services	-48.8***
Education	-2.8
Miscellaneous	-63.4***

Note: *** significant at 1%; ** significant at 5%

Source: Authors, from the simulation results

Table 4 (page 48) shows the differences in the labour supply outcomes between beneficiary and non-beneficiary households. For non-agricultural activities, social grant recipients reduce their participation and average number of hours worked, especially for the wage workers. However, for agricultural wage work, social grant recipients have reduced labour force participation and average hours worked but increased involvement in subsistence agriculture activities (although not necessarily the number of hours spent in these activities). This implies that social grant beneficiaries reduce their wage labour hours but tend to spend more time in subsistence agricultural activities. One explanation is that extra income provided by the mainly subsistence agriculture activities does not disqualify the household for the grant.

Table 4: Effect on labour supply

Type	Participation	Time Allocation	
	Average number of individuals	Average annual hours per worker	Average annual hours, all workers
All non-agricultural work	-0.045**	-62.3***	-109.0***
Non-agricultural wage work	-0.038**	-26.0	-101.6***
Self-employment	0.015	-11.4*	3.6
Casual work	-0.012	-20.9	-9.3
Help in others' business	0.002	24.2	1.3
All agricultural work	0.016	-217.4***	-50.8**
Agricultural wage work	-0.022**	-96.5***	-58.1**
Personal subsistence agriculture	0.034**	17.2	7.3**

Note: *** significant at 1%; ** significant at 5%; * significant at 10%

Source: Authors, from the simulation results

Based on the above, the simulation scenario was built around nine simulation variables and changes in the outputs between the real and the counterfactual samples of households (Table 5). The matching technique and the sample comparison show consistent results for all selected variables.¹⁶

Table 5: Changes in simulation variables

Variable of interest	Change (in %)
Labour Supply	
1) Non-agricultural work	-1.5
2) Agricultural work	3.8
Consumption Spending	
3) Food	-3.2
4) Personal	-0.8
5) Transport	-10.3
6) Energy and water	-4.8
7) Clothes and shoes	-4.6
8) Health	-27.3
9) Miscellaneous	-5.2

Source: Authors, from the simulation results

3.5 Comparing the Simulation and Reference Scenarios

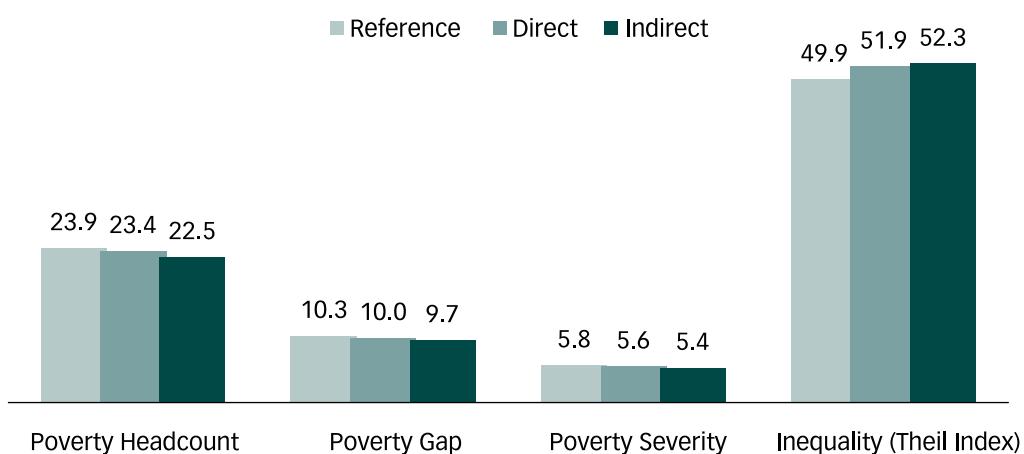
The simulation scenario and the reference scenario were compared to assess the effect of the social grant programme on various aspects. The simulation scenario represents the elimination of the social grant programme in South Africa and is divided into direct and indirect impacts. The reference scenario uses the nationally representative sample of households (the 'real sample').

¹⁶ Tables 3 and 4 are expressed in average hours worked annually per household and per capita rand consumption expenses, respectively. On the other hand, Table 5 is expressed in percentage change of the aggregation hour worked and per capita consumption spending. Thus, only the directions of the changes for the variables of interest are meaningful for analysis.

3.5.1 Poverty and inequality

Figure 12 presents the Foster, Greer and Thorbecke (FGT) poverty indexes and the Theil inequality index (Foster, Greer and Thorbecke, 1984; Theil, 1967) for the two scenarios. A per capita monthly consumption spending of R260 was used as the poverty line¹⁷ and to compute the FGT poverty indexes (headcount, gap, and severity). In the short term, results show little evidence that an alternative use of the resources invested in social grants will lower the poverty head count, poverty gap and poverty severity. This implies that, while social grants in South Africa contribute to poverty reduction (as found in earlier studies), injecting these resources into the economy as other forms of capital can achieve a similar level of poverty alleviation. However, the social grant programme does appear to be doing a better job at reducing inequality than other uses of the resources in the economy.

Figure 12: Poverty and inequality indexes



Source: Authors, from the simulation results

3.5.2 Economic performance

The analysis showed that the grant programme contributes positively to economic performance, as measured by the level of gross domestic product (GDP). Indeed, South African GDP level is 0.9% lower in the absence of the social grant programme (Table 6), driven by households that are spending 5.6% more (private final consumption) and not investing (fixed capital formation -26.1%).

Table 6: Changes in macro variables (%)

	GDP	Public Final Consumption	Private Final Consumption	Fixed Capital Formation	Change in Inventories	Exports	Imports
Share	100.0	19.5	64.6	16.8	1.2	24.5	26.4
Change	-0.9	0.0	5.6	-26.1	0.0	-3.3	-3.4

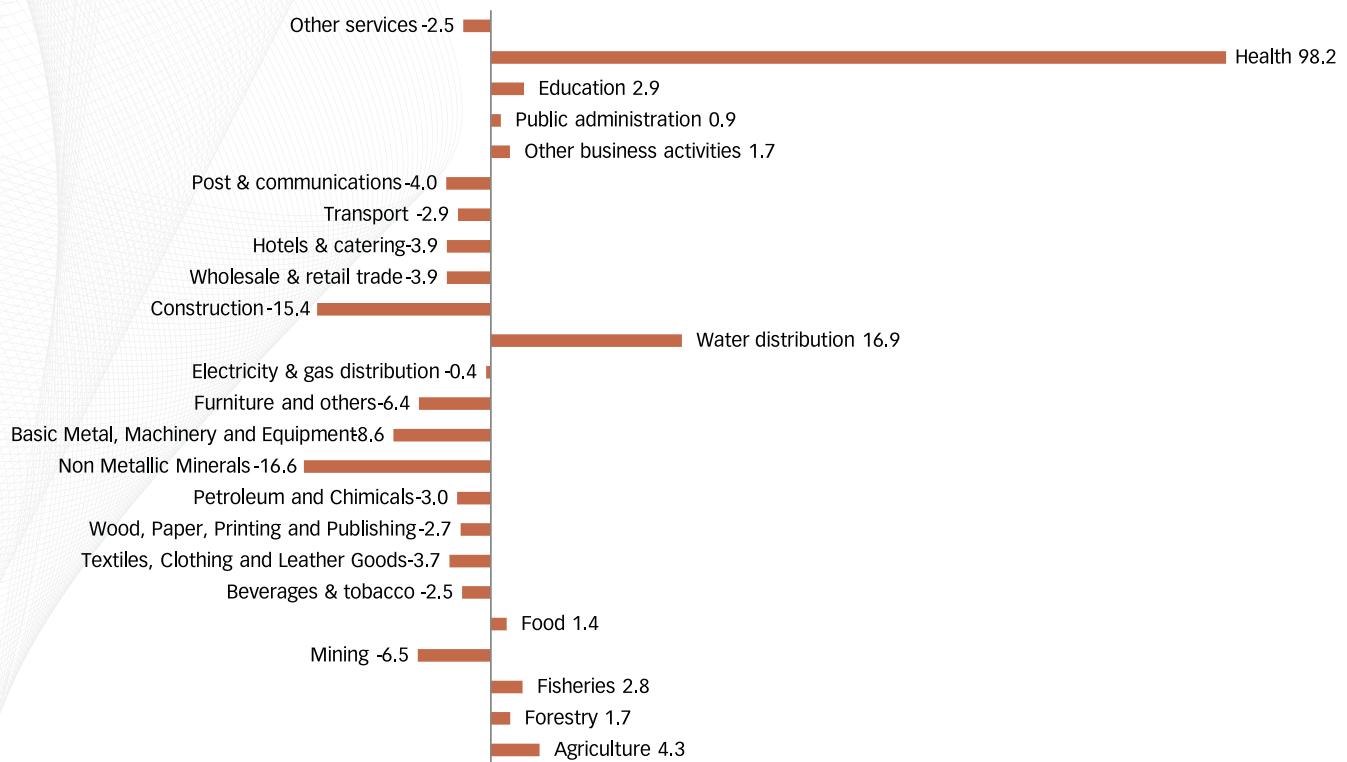
Source: Authors, from the simulation results

As Figure 13 illustrates, in the absence of the social grant programme (under the counterfactual scenario), household demand increases for most of the consumption products, in particular for health, putting an upward pressure on prices. Agriculture and food prices increase, as households have less time to spend on subsistence agriculture activities and so purchase more food from the market. Prices decline for investment-oriented products, especially construction and non-metallic minerals, and basic metal, machinery and equipment. These results imply that the social grant programme contributes to lowering the cost of health services and agriculture and food products.

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¹⁷ The value is equivalent to the international poverty line of US \$2 per day (Leibbrandt et al., 2010:17).

Figure 13: Effects on consumption prices (%)

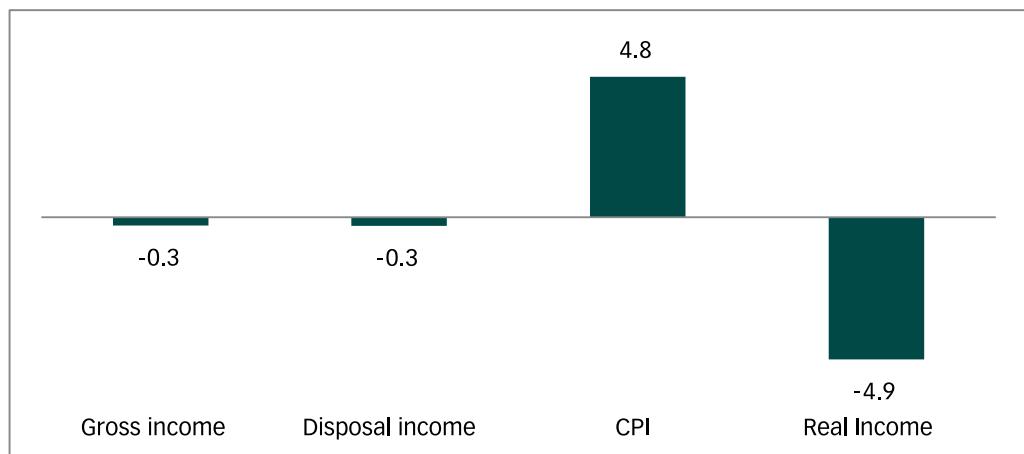


Source: Authors, from the simulation results

In terms of fiscal impact, government earnings do not change significantly (0.2%) but government savings increase (17.7%) because of a cut of social grant transfers. Government extra revenue is assumed to cover its internal debt and contribute in reducing the decline of the overall investment.

Under the counterfactual scenario, households' consumption price index increases by 4.8%, triggered by increasing demand for health services, and agriculture and food products, while households' purchasing power or real income declines by 4.9% (Figure 14). In light of the higher prices and less disposal income, households save less.

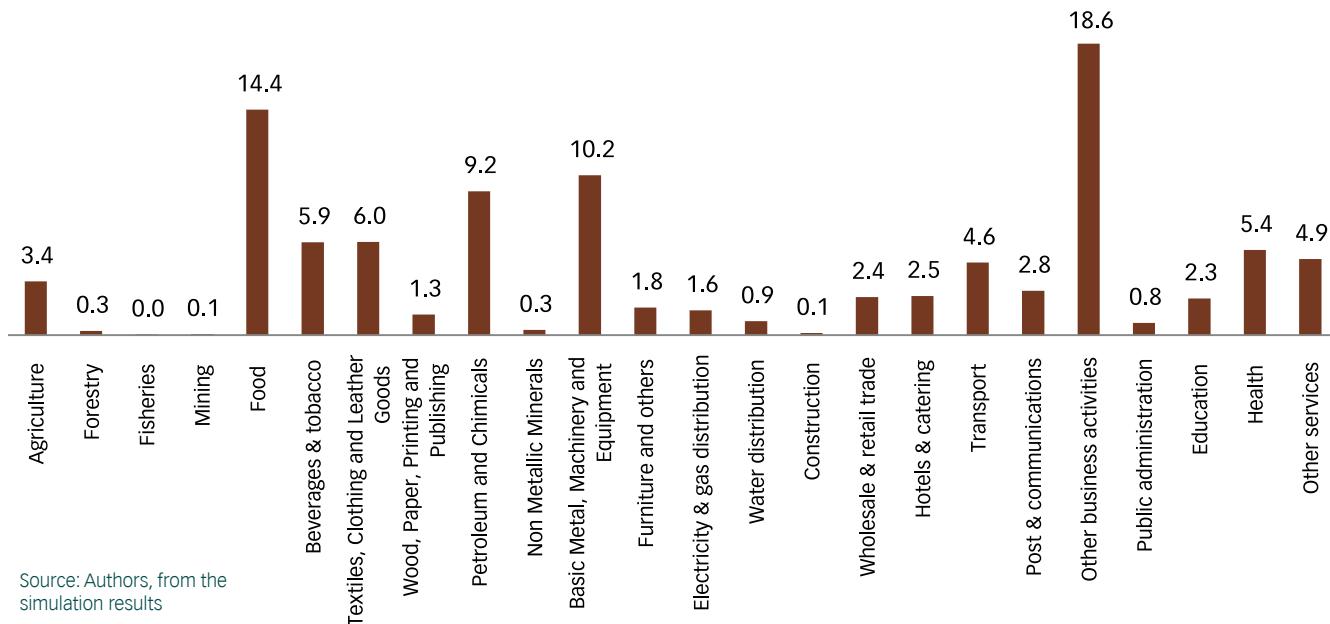
Figure 14: Effects on household income and consumer prices (%)



Source: Authors, from the simulation results

Under the counterfactual scenario, health expenses represent 5.4% and agriculture and food together nearly 18% of household spending (Figure 15).

Figure 15: Households' expenditure budget share (%)



3.5 Conclusion

South Africa introduced a comprehensive social security programme, which includes the old age grant, child support grant, disability grant, and foster care grant, as safety nets to the poor. A number of studies have looked at the impact of the programme on grant beneficiaries, but no research has been done on the impact of the programme on the society at large, particularly on non-beneficiaries. This becomes important as the size of the programme continues to increase.

This chapter is the first attempt to study the effect of the social security programme on the South African economy by looking at what the outcomes would have been without a social grant system ('counterfactual scenario'). After examining the differences in household spending and labour market participation between beneficiary households and non-beneficiary households, a simulation scenario and a reference scenario were compared to assess the effect of the social grant programme on poverty and inequality levels, and economic performance. The simulation scenario represents the elimination of the social grant programme in South Africa, while the reference scenario uses the nationally representative sample of households (the 'real sample').

The results found that households that receive social grants increase their labour supply for agricultural activities and reduce their labour supply for non-agricultural activities. Social grant beneficiaries also spend less per capita than non-beneficiaries on all consumption products (e.g. food, transport and health) except for education and household products, which show no difference in level of spending.

The scenarios revealed that the social grant programme makes a positive contribution to the GDP and results in lower inequality. However, the absence of a social grant programme would lead to a 0.9% decline in GDP and slightly lower poverty indexes. Households' savings would also decline, which is attributed to their reduced purchasing power. This is the result of increased consumer prices, triggered by increasing demand for health services, and agricultural and food products. The analysis shows that the social grant programme contributes to lowering the cost of health services,

and agriculture and food prices. Social grant beneficiary households are more involved in subsistence agriculture and, therefore, purchase less food. They also spend less on health services, and consequently extra income is spent on other consumption products or on investment products.

The analysis shows that social security spending contributes to faster economic growth and to reducing inequality in South Africa. However, to ensure that this spending can continue, fiscal prudence and consolidation should be pursued in the medium term.

3.6 Recommendations

With respect to social programmes to eliminate poverty and reduce inequality, the Commission recommends that Government:

1. Moves aggressively towards a fully integrated benefits system that simplifies client access, improves client outcomes and improves fiscal sustainability through greater programme effectiveness, reduced fraud and corruption, and reduced administrative costs.
2. Implements a fully integrated benefits system that seeks efficiencies by, at a minimum, centralising income testing and payment delivery; automating the processing of applications, eligibility and payments, and automating income verification and consolidating programme delivery.
3. Collects the information necessary to deliver and evaluate a fully integrated benefits system. In so doing, personal information and privacy should continue to be respected and protected.

PART
2

Improving Investments in Education and Health

Both economic theory and empirical evidence show that human capital is a critical input for long-term growth. Improving human capital requires access to quality (a) education, (b) health and nutrition services and (c) food and nutrition. Perhaps the most important issue facing families today is education, particularly education outcomes. When unemployment is drastically high and the economy unpredictable, children need to be given a good foundation and every opportunity to get ahead. Education is crucial to that. It gives the children a chance to continue their studies at tertiary level, which opens the door to all kinds of jobs and opportunities, through gaining the skills and knowledge that many employers want. Good health and nourishment improves the human capital base of the country and thus economic growth, by increasing productivity and other labour market outcomes, such as income and employability.

The economic growth dividend of upgrading human capital, through quality education, health and nutrition, is potentially enormous. The other dividend (from improving human capital) is reduced inequality, since many of the gains from growth would accrue to the less well-off. Increasing the quality and quantity of skills of disadvantaged children will make growth more inclusive, by reducing the high levels of wage inequality in South Africa. In addition to the lower inequality, reducing the portion of poorly educated will decrease the welfare rolls and the numbers caught up in the criminal justice system. Although the focus here is on basic education funding flows, the Commission has in its 2013/2014 and 2014/2015 submissions made recommendations for promoting excellence in higher education and lifelong learning, as well as dealing with other longstanding problems in pre-school education, e-learning and adult skills. This section consists of three chapters.

Chapter 4 is on equitable resourcing of schools for better outcomes. It evaluates how resources to schools are allocated and their effect on education outcomes, given the government's renewed emphasis on performance and quality. An elaborate budgetary and decision-making process occurs before schools allocations are made. National priorities, statutory costs and (in selected cases) province-specific priorities inform the allocations. The chapter shows that provincial budgets are essentially systematised to follow a particular allocation framework, which means that very little discretion exists in the budgetary and decision-making process.

Chapter 5 looks at adequacy and efficiency in primary health care financing. It assesses the adequacy of the public health care funding, how health care budgets are allocated across the provinces and the efficiencies (or inefficiencies) of the sector. Despite the increasing growth in health spending, the sector is beleaguered by challenges such as suboptimal quality of care, inefficiencies in the system, the heavy burden of disease, input cost pressures, a growing uninsured population, inequitable distribution of resources and the widely held perception that health care is underfunded. If left unchecked these challenges will continue to undermine the performance and delivery of the health care system and negatively affect progress towards the implementation and rollout of National Health Insurance (NHI).

Chapter 6 is on impact of public expenditures on food security. It assesses the effectiveness of the intergovernmental arrangements for implementing the existing policy framework using a value chain analysis of funding instruments for food security. The findings suggest that the Agricultural Consolidation Programme, an important supply-side intervention, has not improved significantly household food security over the period under consideration, despite the observed high efficiency of the programme. Coordination problems are found to exist between different departments, contributing towards the under-performance of some of the agriculture conditional grants.

CHAPTER 4

Equitable Resourcing of Schools for Better Outcomes

CHAPTER 4

Equitable Resourcing of Schools for Better Outcomes

4.1 Introduction

Public ordinary schools are fundamental drivers of socio-economic development, and their adequate and equitable funding is important for realising the goals envisioned in the NDP. The NDP sets out to increase learner attainment levels in literacy and mathematics, as well as to improve learner retention and completion rates to 80% by 2030 (NPC, 2011). To achieve these targets will require far-reaching reforms and interventions, including increased parent involvement, teacher training and reskilling, improved curriculum, school management and accountability, and redirecting (human, infrastructure and funding) resources to areas of greatest need.

Not only are schools battling with the reality of resource constraints and public pressure for improved performance, but the entire public basic education system is plagued by weaknesses and inequalities, and criticised for producing poor quality outcomes. South Africa inherited a dual public education system in which historically advantaged schools (or former Model Cs¹⁸) co-exist with township, rural or poor schools. Model C schools are well-resourced, have better facilities and qualified teachers, can augment state funding with school fees and produce better outcomes, whereas township schools are economically deprived, rely entirely on government funding, face restrictions in charging and collecting school fees, and generally produce sub-optimal results.

The long history of systematic under-investment in township and rural schools has resulted in conditions that are not conducive to quality learning, teaching or achievements. In 1996, the country was short of 29 000 classrooms in primary schools and 14 000 classrooms in secondary schools. The majority of these schools did not have access to electricity, water and sanitation facilities. More importantly, teachers were not adequately trained and not always hired on the basis of prescribed qualifications. These factors, coupled with poor governance, contributed to persistently low education and achievement levels by not only international but also the country's standards (Fiske and Ladd, 2004).

Recognition of these challenges prompted widespread education reforms, which sought to address resource disparities in schools and meet the unqualified constitutional right to basic education. Among the most notable of these reforms were the South African Schools Act of 1996 (SASA) (which makes equitable funding of schools the state's responsibility), equalisation of learner-educator ratios, the post-provisioning model for allocating teachers and the introduction of the National Norms and Standards for School Funding (NNSSF) aimed at progressively reducing the funding gap between rich and poor schools (Ndhlovu, 2012). The NNSSF remains the central instrument for redistributing resources towards needy learners and disadvantaged schools.

Since the introduction of the NNSSF, the aggregate state funding gap between rich and poor schools has narrowed markedly. Learners in poorer schools receive five times the amount of state subsidy relative to richer schools. This has been made possible by successive fiscal reforms aimed at making the allocation of funding relatively equitable. However, the resource allocation and performance of schools across and within provinces appear to be becoming increasingly uneven. Despite the legislative and policy imperatives to distribute resources equitably, poor schools in poor regions are experiencing structural resource shortages and poor school governance. These disparities have resulted in: (1) unprecedented migration of learners to richer schools, (2) chronic infrastructure deficit, especially in Eastern Cape and Limpopo provinces, and (3) pervasive sub-optimal attainment and achievement levels across and within provinces.

¹⁸ Former state-financed, all-white schools

The migration of learners deprives poorer schools of state funding and quality teaching staff because both are allocated on a per learner basis. Similarly, school infrastructure deficiencies expose learners to safety risks and exacerbate the unconducive teaching and learning environment. Poor performance also decreases public confidence in the public education system, in particular for poorer schools.

The funding framework, which is at an aggregate level for provinces and at a micro level for schools, does not adequately reflect historical and geographical disparities, constraints affecting poor schools and the progress in richer schools with e-education and equipping learners to participate in the information economy. More disturbingly, the national adequacy benchmark for learner subsidies (i.e. the minimum amount considered adequate for realising a learner's right to education) has little empirical basis and is adjusted annually by inflation rates only. Evidence from the Gauteng province suggests that the minimum subsidy allocation for poor learners is insufficient to meet national policy aspirations such as the "one textbook per learner" policy.

In principle, provinces are allowed to increase the national learner subsidy allocations and redirect resources where the needs are greatest. However, they often have little room to manoeuvre, as personnel costs personnel costs which are fairly inflexible in the short term dominate their budgets, reducing the scope for other forms of discretionary spending (80% of total education allocation), and national policies dictate how most of the resources are distributed between schools. Nevertheless, this does not exonerate provinces from their failure to use existing resources to address inequities between schools and meet the objectives envisaged in the Constitution and the South African Schools Act (SASA).

Against this background, the chapter seeks to evaluate how resources to schools are allocated and the effect of these resources on teaching and learning outcomes, given government's renewed emphasis on performance and quality. An analysis of the budget process seeks to establish how expenditure decisions at the aggregate and school levels are determined, given the constitutional requirement and policy imperative to achieve equity in both financing and outcomes.

After a discussion of the methodology, the results and findings are examined, with specific emphasis on the resource-allocation process to schools, the implementation of national funding policies and the way in which resources are translated into education outputs. The concluding remarks are followed by some recommendations.

4.2 Methodology

The methodology entails a detailed analysis of budget allocations to schools and a panel data regression estimation of the effects of school resources on school performance. The model uses data from 47 districts over a three-year period. Variables of interest include matriculation pass rate (used as a proxy for school performance) regressed against gross value added per capita and a poverty indicator. The model is specified as follows:

$$\text{PerV}_{it} = \beta_0 + \beta_i \mathbf{X} + \mu_i + \varepsilon_{it} \quad (1)$$

Where \mathbf{X} is a vector of explanatory variables and μ_i represents unobserved district-specific (time invariant) fixed effects. Panel data approaches allow these fixed effects to be removed, thus eliminating a source of bias in the model.

4.3 Equal and Adequate Education

Learners in South Africa have the right to an equitable and adequate basic education, conferred by the constitutional Bill of Rights. Education equity has two dimensions. The first is equal treatment or fairness, meaning that personal and social circumstances (such as gender, socio-economic status or ethnic origin) should not be obstacles to achieving educational potential. The second concerns inclusion and equal opportunity, aimed at ensuring a basic minimum standard of education for all. There is no consensus among policy-makers on how to achieve equity, but three policy areas standout: the design of education systems, practices in and out of school, and how resources are allocated.

The key policy question in assessing resource allocation is how big a share of government spending is allocated to the poor. Studies are unresolved as to whether or not government spending in South Africa is pro-poor. Some researchers argue that government expenditure exhibits anti-poor bias because (1) the unit cost of service provision to the poor is lower and (2) the use by poor households of public services is lower due to information problems and structural factors such as high transport costs (Blecher, 2008; McIntyre, 2012). Other researchers demonstrate that government-wide spending, especially on schools, is increasingly becoming well-targeted or pro-poor (Burger, 2006; Van der Berg, 2005).

National norms and standards for school funding inform allocations to schools and should ideally take into account obstacles experienced by learners in different schooling regions. However, evidence suggests that school allocations are not always informed by existing funding norms or properly costed inputs. The combination of two factors entrench inequities. First, funds available for schools are generally insufficient, as they comprise a residual of what remains after deduction of priority personnel charges against the budget. Second, the imbalance in the mix of poor or rich schools makes achieving intra-provincial funding equity difficult. Provinces with a proportionally higher percentage of poorer schools tend to have significantly less funding for learners in the poorest schools. Ironically, poor provinces tend to have a large number of excess educators, implying weaknesses in internal expenditure prioritisation (Fiske and Ladd, 2004).

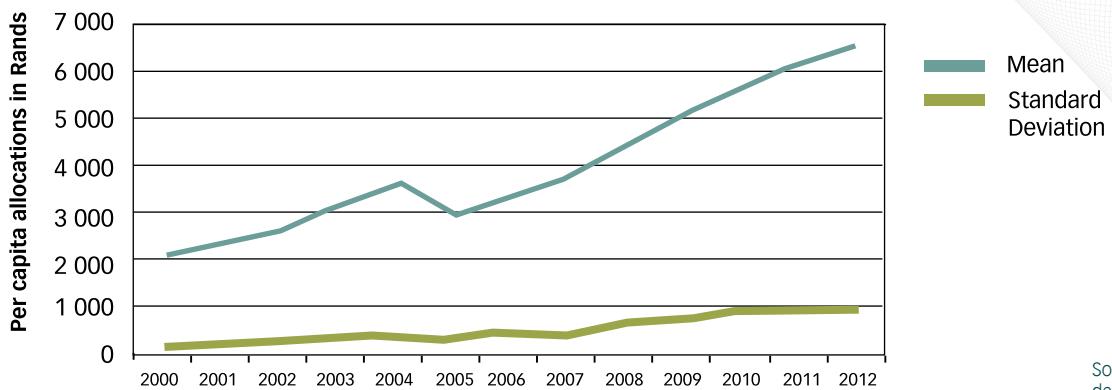
A key determinant of better learner outcomes is the availability and access to essential education inputs such as classrooms, textbooks, stationery and other learner support materials. However, in many instances there is no clarity about the minimum inputs required across schools of different types to produce adequate education or minimum acceptable outcomes. Ambiguity over the relative contribution of different inputs to the outcomes makes prescribing minimum education inputs often difficult, while other inputs are outside the control of policy-makers.

Nonetheless, the need to set explicit minimum education inputs is receiving increasing attention. The SASA specifically requires the Minister of Basic Education to set norms and standards on key education inputs, including curriculum, funding, staffing, and infrastructure and language policies. However, the SASA is neither conclusive nor prescriptive about the full composition and minimum package of inputs required to produce a given level of education output. Various norms and standards and other policy documents offer a breakdown of what may be considered as education inputs, but these are not definitively expressed. For instance, norms and standards on funding and school infrastructure stipulate that each school must have sufficient sanitation facilities, water supply, libraries and funding (among other things) but do not indicate the combination of facilities required to make a school fully functional. The model for distributing posts allocates teachers to schools proportional to the number of learners. Unlike the norms for funding and distributing posts, infrastructure norms do not expressly provide for redress. More importantly, input norms are not directly linked to the production of outputs stipulated in the new Curriculum and Assessment Policy Statement (CAPS). CAPS contains details on the content that teachers should teach and assess on a grade-by-grade and subject-by-subject basis. Unpinning CAPS is the assumption that all schools have the required and adequate inputs to produce prescribed learning outcomes. This assumption, as the subsequent sections show, ignores inherent resources disparities that exist between and within provinces, districts and schools.

4.4 Distribution of Resources to Schools

The process of allocating resources to schools occurs on four levels. The first level is a horizontal allocation to provinces through the provincial equitable share (PES). At this level provinces are treated fairly equally insofar as allocations per capita is concerned. As Figure 16 shows, per capita allocations increased from an average of R2200 in 2000 to over R6300 in 2012. Gauteng and the Western Cape had the lowest per capita allocation of just under R5000, while the Eastern Cape, Limpopo and the Northern Cape had the highest allocation of over R7000 per capita.

Figure 16: PES per capita allocations (2001–2012)



Source: National Treasury database

This analysis shows that, at an aggregate level, the PES formula is redistributive and resources are equitably allocated. Whether the higher per capita allocations in Limpopo and the Eastern Cape translate into better education outcomes remain an empirical question, although evidence from the Southern and East African Consortium for the Monitoring of Education Quality (SACMEQ) suggests this not the case (SACMEQ, 2011). The Annual National Assessments also provide further evidence for this.

The second level in allocating resources to schools takes place at an executive level, where the provincial executive (legislature) determines the amount of funding allocated to education. Education accounts for 40% of total provincial expenditure.

The third level is where the Member of Executive Council (MEC) responsible for education further disaggregates the budget and allocates resources to schools, taking into account province-specific circumstances. On average, public ordinary schools account for just over 80% of total education allocations. At this level of budgeting, allocations are based on whether resources are targeted at priority programmes rather than equity concerns.

The fourth and final level of allocating funding to schools occurs at sub-programme level, where resources are allocated to various subcomponents of public ordinary schooling. Budgets are allocated to various sub-programmes depending on province-specific circumstances. For instance, in the Eastern Cape the emphasis tends to be disproportionately on secondary schools, whereas other provinces allocate more than half of the public ordinary school budget to primary schools. The budgeting patterns of Eastern Cape are inconsistent with the research that shows a positive relationship between primary school participation and learning outcomes in subsequent grades (OECD, 2011). The relationship is strongest in schooling systems that offer primary education to a larger proportion of the student population over an extended period, have a small pupil to teacher ratio (14:1) and invest more per child (OECD, 2011).

In spite of what appears to be an elaborate budgetary decision-making process, provinces have little or insignificant control over a considerable proportion of expenditure items. More than 90% of primary and secondary school allocations are earmarked for personnel costs, leaving provinces with paltry resources for other essential non-personnel, non-capital (NPNC) education inputs, such as learner-teacher support material, school maintenance and other day-to-day operational costs.

Table 7: Estimated variance between allocated and stipulated learner subsidies – 2012 (Rand)

	EC	FS	GT	KZN	LP	MP	NC	NW	WC
Primary schools allocation	5 889	4 461	11 299	17 300	9 099	6 885	1 979	5 109	6 368
Secondary schools allocation	14 187	3 131	8 161	11 810	8 376	4 121	954	2 407	4 051
Total allocation	20 076	7 592	19 460	29 110	17 475	11 006	2 933	7 516	10 419
Compensation of employees	18 101	7 000	16 804	25 382	16 202	10 202	2 755	7 383	9 389
COE as % total school allocation	90%	92%	86%	87%	93%	93%	94%	98%	90%
Residual / school subsidies	1 975	592	2 656	3 728	1 273	804	178	133	1 030
No of secondary school learners	614 454	244 813	677 137	1 538 012	680 471	387 617	91 930	259 678	335 343
No of primary school learners	1 130 356	367 909	1 052 827	1 057 454	850 275	575 576	165 862	447 931	584 754
Total number of learners	1 886 982	646 093	1 858 745	2 812 844	1 665 013	1 027 851	274 189	760 272	991 685
Estimated per-learner allocation	1 046	916	1 429	1 325	765	782	649	175	1 038
Average prescribed per-learner subsidy weighted by provincial poverty distribution	858	786	676	805	891	798	771	814	580
Variace	188	130	753	521	-127	-15	-123	-639	459

Source: Own Calculations

Table 7 shows that, after making provision for personnel costs, some provinces are left with inadequate resources to fund schools as per national policy guidelines. Thus, Limpopo, the Northern Cape and North West are unable to meet the target-per-learner subsidy because of a large wage bill.

The funding left over (after personnel costs) is allocated to schools as prescribed by the NNSFF. The SASA and the NNSFF requires provinces to set aside budget for NPNC expenditure, which is allocated to public schools through a predetermined funding framework. Schools are categorised into five quintiles representing the socio-economic status of the community within which they are based: quintile 1 represents the poorest schools and quintile 5 represents the well-off schools. Each school is allocated funding according to the set minimum per-learner allocation applicable to each quintile. The poorest schools (quintiles 1, 2 and 3) are classified as fee-free and receive 80% of the NPNC allocation. Table 8 gives a summary of the national learner subsidy allocations.

Table 8: National targets for school allocations (2013)

Quintile	Per Learner allocation	Proportion of funding allocated	% of schools / quintile	No Fee target (No of learners targeted)
Quintile 1	R1010	30%	22.9 %	100%
Quintile 2	R1010	27.5%	16.7 %	100%
Quintile 3	R1010	22.5%	24.9 %	100%
Quintile 4	R505	15%	18.8 %	67%
Quintile 5	R174	5%	16.7 %	22%
No Fee threshold/ minimum adequate	R926			

The total estimated national funding for learner subsidies or NPNC allocations is R9.3-billion, of which more than 70% is allocated to four provinces: the Eastern Cape, Gauteng, KwaZulu-Natal (KZN) and Limpopo. These provinces have to set aside a proportionally larger percentage of their public ordinary school allocations for Non-Personnel Non Capital (NPNC) costs because of high levels of poverty. For example, 34.7% and 21.6% of learners in the Eastern Cape and 34% and 22.3% of learners in Limpopo fall in quintile 1 and 2, compared to only 6.5% and 8% in the Western Cape.

In provinces with a high concentration of poor learners, learner subsidies are below national targets because of the difference between how the education component of the PES is computed and how funding is allocated to schools. At provincial level, the education component of the PES is based on school enrolments and school-age population, but allocations to schools are made on the basis of poor learners. As a result, provinces with a high number of poor learners (who fall in quintile 1 and 2) are short-changed.

As Table 7 shows, poor schools or learners are allocated relatively higher subsidies. However, the critical question is whether such allocations are sufficient to provide equitable education. Evidence suggests that provinces are finding it increasingly difficult to fund adequate education or full curriculum delivery (Ndlovu, 2012; Oliphant, 2008; Gauteng Department of Education, 2013). In Gauteng, the provincial education department bails out schools unable to pay for municipal services, but it is unable to fulfil the requirements of the new CAPS and has a funding shortfall of R300-million for Grade 12 textbooks. The province attributes part of the shortfall to unfunded national policies (i.e. CAPS) that require provinces to provide one text book per learner per subject. Books are also purchased at different prices, which causes budgeting difficulties, while ambiguous budgeting means that schools are often unsure about how to access funds to cover operational costs (Ndlovu, 2012).

4.5 School Subsidy Allocations

The final stage in the budgeting and fund allocation process is when the MEC places a notice in the Provincial Gazette detailing the per-learner allocations and the total amounts to be transferred to each school. However, what happens in practice is slightly different from policy directives, as Table 9 indicates.

Table 9: Actual provincial allocation per learner against national targets – 2012/13 (Rand)

Quintile	National Target	EC	FS	GT	KZN	LP	MP	NC	NW	WC
1	1 010	926	1 010	1 010	932	808	1 010	1 010	1 010	1 012
2	1010	926	1010	1010	932	740	1010	926	1010	1011
3	1010	926	1010	1010	932	740	1010	926	1010	1011
4	505	505	505	505	505	505	505	505	606	548
5	174	174	174	240	505	174	138	174	174	250

Source: National Treasury, 2013.

The Eastern Cape, KZN and the Northern Cape fund quintile 1–3 learners at a level equal to, or slightly above, the no-fee threshold of R926, whereas Limpopo underfunds quintile 2 and 3 learners (allocating 20% and 27% respectively below the no-fee threshold and national target). The variations of learner allocations suggest an inequitable distribution of resources among provinces. However, the variations also reflect poor provincial fiscal choices and management, where certain expenditure priorities take precedent over education financing.

The variation in per-learner allocations also occurs within and across districts and different types of schools and is unrelated to provincial expenditure decisions and inequitable school funding norms. The SASA distinguishes between two types of schools: section 21, which are self-managing schools that have a greater degree of authority and autonomy over managing school funds and general

running of the school, and non-section 21, which have less flexibility in managing their allocated budget and receive allocations directly from the PEDs. The PEDs indicate to schools, through a proxy budget, how funds should be allocated (Ndhlovu, 2012).

The centralisation of school allocations has a number of implications for the delivery of good education outcomes. Firstly, provinces and districts do not have sufficient capacity to process requisitions from schools quickly, which leads to late delivery of goods or rendering of services. Secondly, and perhaps most importantly, the schools are unable to track actual expenditure on their budget despite being expected to reconcile spending with allocations (Giese, 2009).

The variation in allocations to different types of schools within (and across) the districts is explained by the number of learners per school and the school quintile. For instance Table 10 shows the learner allocation in the five districts of the Free State.

Table 10: Comparison of per learner appropriation by district by type of school (2012/13)

Free State		Non Section 21	Section 21	Total
Fezile Dabi	Appropriation/Learner	R1 144	R818	R835
	Learner/Educator	21	28	27
	Number of learners	5 523	102 968	108 491
	Number of schools	114	133	247
	Number of learners/school	48	774	
Lejweleputswa	Appropriation/Learner	R1 030	R815	R822
	Learner/Educator	17	28	27
	Number of learners/school	49,2	733,73	
Motheo	Appropriation/Learner	R770	R700	R706
	Learner/Educator	27	28	R28
	Number of learners/school	176	725	
Thabo Mufutsanyana	Appropriation/Learner	R1 033	R885	R891
	Learner/Educator	21	27	R27
	Number of learners/school	28	605	
Xhariep	Appropriation/Learner	R927	R882	R886
	Learner/Educator	24	26	R26
	Number of learners/school	126	493	

Fezile Dabi district has 114 x non-section 21 schools with only 5500 learners (i.e. a learner/school ratio of 48) and 133 x section 21 schools with 103 000 learners (i.e. a learner/school ratio of 774). By implication, non-section 21 schools have more resources to spend per child, even though learners are funded equally at an aggregate level. This is especially true in that non-section 21 schools are historically well resourced.

4.6 Other Essential School Inputs

Quality teaching and infrastructure are two elements that are important for improving learner achievements. From the aggregate data, South Africa does not appear to have a significant shortage of teachers, but the competence, skills and experience of teachers and inequities in the allocation of teachers between poor and affluent schools are not revealed. Teachers are allocated to schools through the post-distribution model (post-provisioning), which is based on the number of learners, grades, study fields or subjects, language of instruction and poverty grading of a school. This means that (for example) a school with a wide spread of subjects or languages is allocated more teachers than a school with less subjects or languages, even if the two schools have the same number of learners. Therefore, the model benefits 'affluent' schools because it does not take into account the 'historical competencies' that resulted in the different levels and spread of subject offerings

(Equal Education, 2009). These competencies include the ability of affluent schools to employ additional teachers using the school governing body reserves and to attract experienced and qualified teachers. More importantly, no prescribed norms and standards exist for allocating teachers across schools of different types. A combination of these factors, together with the unintended effects of reducing curriculum spread in rural schools, thus reinforce inequities.

Infrastructure has been found to have a significant impact on learner achievement, wellbeing, enrolment and attendance (Murillo, 2011; Cuyvers, 2011; Branham, 2004). Access to water, electricity, communication and libraries all have a positive impact on education outcomes across the income distribution, but South Africa has high backlogs in school infrastructure. In 2011, nearly three-quarters (72.2%) of schools did not have libraries, while over a quarter (27.5%) had no toilets. A further 85% and 77% had no laboratories and computer rooms respectively, while 9% had no electricity. More disturbingly, only 7% of school libraries and 10% of school computer rooms are fully stocked (DBE, 2011). Infrastructure backlogs are particularly acute in the Eastern Cape, KZN and Limpopo, as well as in poor quintile schools. More than 60% of schools in Eastern Cape have a learner classroom ratio of over 45, while 41% of schools in KZN do not have adequate toilets. Limpopo has the highest proportion of schools without libraries. Of the quintile 1 schools, over 22% have no electricity, 14% have no water, and more than 92% are without libraries.

Various policy documents make provision for learning and teaching support infrastructure. For instance, the NNSSF states that PEDs must budget for school infrastructure from their overall education budget but does not prescribe the amount of infrastructure funds to be allocated to each province or each type of school. It simply states that funding must show preference for redress and equity.

In recent years, funding for school infrastructure has gradually become programme-based and diverted into conditional grants overseen by the national Department of Basic Education. The two main conditional grants are: the school infrastructure grant, which is allocated directly to provinces and implemented by the Department of Public Works on behalf of the PEDs, and the school infrastructure backlogs grant, which is an in-kind grant managed by the Development Bank of Southern Africa on behalf of the national education department.

Over half (55%) of the school infrastructure grant is allocated to the three provinces with the highest infrastructure backlogs (the Eastern Cape, KZN and Limpopo). Similarly, the school infrastructure backlogs grant is allocated mainly to the Eastern Cape (65% in 2012/13 and 90% in 2013/14) for the eradication of inappropriate school structures, while the remainder is allocated to other provinces to reduce basic services backlogs (as part of the Accelerated School Infrastructure Delivery Initiative programme). Together, these two grants account for over R11-billion in education infrastructure spending. Other education infrastructure spending comes from relatively small provincial own allocations. The contribution of PEDs to capital spending from their own PES allocations has been declining over time, as conditional grants allocations increase. As Table 11 shows, the capital expenditure of most provinces, with the exception of KZN and Gauteng, is funded entirely through conditional grants.

Table 11: Provincial own allocations to infrastructure (Rand)

	Capital Spending	School Infrastructure Grant	Variance
Eastern Cape	972 857	883 403	89 454
Free State	496 137	459 635	36 502
Gauteng	1 466 152	512 866	953 286
Kwazulu Natal	2 696 135	1 247 477	1 448 658
Limpopo	893 620	942 091	-48 471
Mpumalanga	614 552	530 711	83 841
Northern Cape	310 153	307 609	2 544
North West	504 645	507 200	-2 555
Western Cape	585 006	431 397	153 609
Total	8 539 257	5 822 389	

Source: Adopted from National Treasury, 2013.

With the recent introduction of the norms and standards for school infrastructure and the requirements thereof, the financing arrangement for education infrastructure would need to be realigned and increased drastically to meet the target of full implementation by 2030. The new minimum uniform norms and standards for school infrastructure require PEDs to provide each school with essential infrastructure, such as water, sanitation, libraries, sport facilities by 2030 (DBE, 2013).

4.7 Translating Resources into Outcomes

The linkage between funding levels and education outcomes has been widely explored and found to be insignificant. South Africa spends approximately 6% of total GDP on education but consistently fails to produce a commensurate improvement in education outcomes. Recent data suggests that the rate of growth in per-learner allocation is decreasing, perhaps indicating government's acknowledgement that education outcomes do not respond to increasing resources. Despite this decline, funding norms appear to have contributed towards reducing inequity in funding to schools, but the quality of education is proving to be a more enduring problem (Taylor, 2011). Given these findings, do allocations have any effect on school performance?

An analysis of the Free State province found a strong negative correlation between allocations to schools and education outcomes (matric results and annual national assessment (ANA) tests) in Grades 12 (matric),¹⁹ and 9²⁰ (see Table 12).

Table 12: Correlation matrix – school allocations and education outcomes

	Matric Pass	ANA 3	ANA 6	ANA 9	S A
Matric Pass Rate	1				
ANA 3 Index	-0,90	1			
ANA 6 Index	-0,48	0,63	1		
ANA 9 Index	-0,81	0,85	0,84	1	
School allocations (SA)	0,10	0,27	0,69	0,44	1

Source: Author's calculations

The correlation coefficient between Grade 6²¹ result and school allocations is positive but weak. A weak correlation between allocations and outcomes is a cause for serious concern, even though the nature of the analysis does not allow conclusive observations to be drawn. The results suggest diminishing returns, as after increasing up to Grade 6, the correlation coefficients start to decline.

South Africa's educational quality lags far behind that of poorer countries and is the lowest of the middle-income countries, as demonstrated by international tests, such as the Trends in International Maths and Science Surveys (TIMSS), Progress in International Reading Literacy Study and SACMEQ. South Africa performed the worst in mathematics and just below average on reading. However, the poor education attainment is concentrated in poorer communities. The TIMSS survey found inequities in education quality and an inverse relationship between funding and attainment levels, particularly within quintile 1 and 2 schools. Crouch and Mabogoane (1998) attribute the high variability in school performance to different efficiencies, hinting at managerial problems in many schools, learner background and teacher inputs. Yet the differentials in reading and mathematics performance between poor and affluent schools far exceeded that of other SACMEQ countries, suggesting that the problem may very well be structural (Van der Berg, 2006).

Tables 13 and 14 show the variation in education outcomes between provinces and districts. Poor outcomes are overwhelmingly concentrated in poverty-stricken provinces and districts. Schools that are within centres of economic power consistently top the charts of education performance outcomes. In contrast, schools in the rural provinces and districts rank lowest in both matriculation and ANA results. In particular, districts in the Eastern Cape and the Greater Sekhukhune district of Limpopo appear in the bottom five of most test results. The consistent poor education outcomes in poor regions reinforce poverty and the cycle of low education attainment.

¹⁹ Grade 3 ANA results is an index of maths and home language result weighted equally

²⁰ Grade 9 ANA results is an index of maths and home language test result weighted equally

²¹ Grade 6 ANA results is an index of Maths, home language and first language test results weighted equally

Table 13: Index of education performance outcomes by province by district (2012)

	Matric	District	ANA 3	District	ANA 6	District	ANA 9	District	Total	District
Top 5	GP	Gauteng north	GP	Ekurhuleni south	GP	Ekurhuleni south	GP	Tshwane south	GP	Ekurhuleni north
	GP	Tshwane north	GP	Ekurhuleni north	GP	Sedibeng east	GP	Sedibeng east	GP	Ekurhuleni south
	GP	Ekurhuleni north	GP	Sedibeng east	WC	Metropole_Central	GP	Ekurhuleni north	GP	Tshwane south
	WC	Westcoast	GP	Gauteng east	GP	Tshwane south	GP	Ekurhuleni south	GP	Sedibeng east
	GP	Tshwane south	EC	Gauteng east	WC	Metropole_South	GP	Gauteg west	WC	Metropole_Central
				East London						
Bottom 5	EC	Butterworth	EC	Lady Frere	EC	Maluti	KZN	Ugu	NW	DR. R.S. Mompati
	EC	Dutywa	NW	Ngaka M Molenna	EC	Sterkspruit	LP	Mopani	KZN	Obonjeni
	EC	Mt Frere	NC	John Taolo Gaetsewe	NW	DR. R.S. Mompati	KZN	Obonjeni	LP	Mopani
	EC	Qumbu	LP	Greater Sekhukhune	KZN	Obonjeni	LP	Greater Sekhukhune	LP	Waterberg
	EC	Fort Beaufort	NW	DR. R.S. Mompati	LP	Greater Sekhukhune	LP	Vhembe	LP	Greater Sekhukhune

Table 14: Index of education performance outcomes by province by district (2013)

	Matric	District	ANA 3	District	ANA 6	District	ANA 9	District	Total	District
Top 5	GP	Ekurhuleni south	GP	Ekurhuleni south	GP	Metropole_South	GP	Tshwane south	GP	Ekurhuleni south
	GP	Sedibeng west	GP	Sedibeng west	WC	Metropole_Central	FS	Motheo	FS	Ekurhuleni south
	GP	Ekurhuleni north	GP	Ekurhuleni north	WC	sedibeng east	FS	Thabo Mofutsanyana	FS	Ekurhuleni north
	GP	Tshwane south	KZN	Umlazi	GP	Ekurhuleni north	MP	Ehlanzeni	MP	Umlazi
							FS	Fezile Dabi		
Bottom 5	LP	Waterberg	EC	Dutywa	LP	Vhembe	KZN	Umkhanyakude	KZN	Waterberg
	EC	Graaf-Reinette	EC	Fort Beaufort	EC	Mopani	LP	Mopani	LP	Graaf-Reinette
	EC	Sterkspruit	EC	MT Fletcher	EC	Fort Beaufort	EC	Lady Frere	EC	Sterkspruit
	LP	Greater Sekhukhune	EC	Lady Frere	LP	Greater Sekhukhune	LP	Greater Sekhukhune	LP	Greater Sekhukhune
	NC	John Taolo Gaetsewe	EC	Sterkspruit						

4.8 Conclusion

South Africa has an elaborate process of budgeting and allocating resources to schools. At an aggregate level, schools are funded through the education components of the PES, divided equitably across the nine provinces. Each province's share is then allocated to different functions such as education, health, agriculture and provincial roads and expenditure line items through a process involving the provincial executive and accounting officers. The allocations are mainly informed by national priorities, statutory costs and (in selected cases) province-specific priorities. Provincial budgets are essentially systematised to follow a particular allocation framework, which means that the budgetary decision-making process contains very little room for discretion. Personnel costs account for more than 90% of the allocation, leaving only 10% for other important education inputs. This remainder is allocated directly to schools, as part of school subsidy allocation or the NPNC budget. These subsidies are underpinned by the SASA and the NNSF, which seek to improve equity in funding and delivery of quality education across schools of differing capacity.

The way in which the NPNC budget is allocated indicates that South Africa has, at the very least, achieved equal treatment of learners. Allocations are made based on predetermined and pro-poor funding norms; a proportionally higher subsidy is allocated to learners in poor areas to account for their inability to pay and other costs constraints. However, the country has not necessarily achieved equitable education, given that the distribution of essential resources across different schools disregards historical disparities and other important constraints that affect disadvantaged schools in particular. Concerns also remain over the adequacy of the subsidy, particularly in schools that are entirely dependent on government allocations and in light of the increasing national policy priorities.

The provision of other essential education inputs is skewed and not aligned to the general policy framework of redressing funding and equity. The teacher allocation model is not informed by norms and standards and does not take into account historical and geographic disabilities experienced by poor schools. Similarly, responsibilities for spending on infrastructure are not clearly distinguished between provincial departments and schools. For the most part, provincial departments rely on national conditional grants to fund new 'big ticket' infrastructure, while the maintenance/refurbishment of existing infrastructure is neglected. Although the NNSF prescribes that a certain proportion of the learner subsidy allocation must be used for maintenance, in practice schools are unable to make such provision because of the centralisation of their budgets and inadequacy of the subsidy.

Allocation of funding at the aggregate level is evenly distributed but becomes more unequal as the budget cascades down to schools. This inequality is in part because of poor provincial fiscal management and of the distribution of poor learners across provinces and schools of different types. The variation in learners' numbers, the number of no-fee schools across districts and the amount of funds spent on each learner create distortions, which show up as poor outcomes. More importantly, the subsidy allocation to schools is poorly managed and monitored. Recipient schools are unaware of how provincial education departments spend their allocations, and provinces have no means of ensuring and monitoring whether allocations are used in specified areas.

More disturbingly, growing evidence reveals a dissociation between resources and outcomes in schools, especially in poorer provinces and districts. Part of the reason for the divergence is that input norms are not expressly linked to the production of output standards. Efforts to redirect additional financial resources in poor performing regions and schools need to be complemented by interventions that address the underlying cause of poor outcomes. Failure to address these concerns will inevitably create a perpetual cycle of inequality and deprivation.

4.9 Recommendations

With respect to equitable resourcing of schools for better outcomes, the Commission recommends that:

1. The Department of Basic Education aligns learner subsidy allocations with national policy requirements and priorities. The current baselines do not cater for the significant increase in funding to cover the curriculum requirements i.e. Curriculum Assessment Policy Statement (CAPS), norms and standards for school infrastructure and municipal services to schools among others. The alignment must be accompanied by enhanced oversight of provincial education departments (PEDs) to ensure adherence to national policy priorities.
 - a. PEDs must reprioritise their budgets for public ordinary schools away from personnel, ensure an appropriate mix of teaching and non-teaching staff, make adequate provision for learners' subsidies within the public ordinary school programme and redirect resources towards districts that experience multiple performance obstacles.
2. The allocation framework to schools takes into account the full package of minimum education inputs when deriving the minimum adequate benchmark funding per learner, in order to address the skewed distribution of resources between schools and districts. These inputs must be linked to both the process norms and output standards.
3. The allocation framework for education infrastructure conditional grants sets out clear expenditure targets for quintile 1 to 3 schools and timelines for addressing priority infrastructure backlogs in each quintile. The School Infrastructure Backlogs Grant must also make provision for a transitional asset handover process of new schools to School Governing Boards (SGBs) and PEDs on newly built schools. This would address alignment between funding for non-physical inputs and physical inputs, as well as curb decaying of newly constructed infrastructure.
4. School funding norms and standards explicitly indicate the responsibilities of schools and PEDs for maintaining and upgrading school infrastructure, so that the division of expenditure responsibilities is clear, in order to avoid prolonged neglect of infrastructure upgrades and to ensure consistent budget allocation to maintenance and its monitoring thereof.
5. School expenditure and performance are monitored at national and provincial level and accompanied by inspectorate visits. The Department of Basic Education and National Treasury must monitor provincial learner subsidy allocations and intervene where national targets are not met or allocations not transferred to schools timeously. This can be done by means of a portal similar to EMIS where individual no-fee schools can report payment delays and other problems.
 - a. PEDs must, with the assistance of the national department, standardise monitoring of school-level expenditure and performance and, where necessary, provide shared services for preparing and auditing financial services.
6. The Department of Basic Education integrates existing outcomes improvements programmes, such as the integrated national strategy to improve numeracy and literacy, and targets them at poor performing districts, to improve translation of inputs into outcomes. Schools should be placed under the programme for a set period during which necessary infrastructure upgrades are carried out, skilled teachers are attracted and existing teachers trained, learner-specific interventions are carried out and, more importantly, SGBs are trained. This would ensure interventions are holistic and targeted at the schools that experience multiple performance constraints and, more importantly, reduce inter-provincial variation in performance.

CHAPTER 5

Adequacy and Efficiency in Primary Health Care Financing

5.1 Introduction

This chapter assesses the adequacy of primary health care funding, looks at how health care budgets are allocated across provinces and ascertains the efficiency and expenditure of the sector. The study is in line with the National Development Plan (NDP), which (among others) puts forward a set of goals, indicators and action points for the realisation of the 2030 vision for health. These include public health care reforms so that universal coverage can be achieved.

Public sector spending on health care constitutes over 4% of gross domestic product (GDP) and accounts for 14% of total government (non-interest) expenditure (National Treasury, 2010). Public health care services cater for about 80% of South Africa's population, while the private health care system covers the other 20%. Provinces account for about 90% of total public health care spending, with medical aids responsible for 80% of private health care spending (National Treasury, 2009, 2013). In 2010/11 provincial health care spending was close to R100-billion in real terms, with an annual real growth of 5%. This trend is expected to continue given the envisaged implementation of National Health Insurance (NHI).

Despite increased spending, the sector faces many challenges, such as suboptimal quality of care, a heavy disease burden, input cost pressures, a growing uninsured population, the inequitable distribution of resources and the widely held perceptions that health care is underfunded. If left unaddressed, these challenges will continue to undermine the performance and delivery of the health care system and have a negative impact on the implementation of NHI, and the realisation of South Africa's Millennium Development Goals (MDGs) and the NDP objectives. The World Health Organisation (WHO) recommends that countries should spend about 5% of their GDP on public health care. South Africa currently spends about 4% of its GDP on public health care, but this percentage rises to 8% if private health care is included.

Debates about whether the health care system is underfunded are not new and have generated significant scholarly discourses, both locally and internationally. In South Africa, provinces receive funding for health care via the provincial equitable share (PES) and transmit these funds to provincial health programme structures (i.e. district health services). The largest part of the provincial health budget is consumed by district health services, which is where primary health care (PHC) is located. The per capita expenditure at district level varies significantly across provinces and is an indication of funding inequities in the system (Blecher et al., 2003). This variation points to the need for a more equitable approach in determining resource allocation and increased capacity to absorb and spend funds effectively.

District health services are the primary drivers of PHC, and their malfunction can have serious consequences for the quality of health care. Despite the substantial budget allocated to the public health care sector, the quality of health care is poor and inequities in health access have widened (Blecher et al., 2011; Doherty et al., 2000). The inequality and polarisation within the health care system are fuelled and rooted in the funding and institutional arrangements that give rise to inefficiencies (Botha and Hendricks, 2008). These take the form of inadequate human resources, incoherent funding and governance of the district health services, limited powers of hospital managers over the budget, suboptimal public-private mix and redistribution of resources in favour of the public sector, and cost escalation. Provincial health departments allocate funding through the different provincial programmes, but no PHC financing policy is in place to ensure that funding is in line with the agreed set of packages that need to be delivered, despite the importance of PHC for meeting national health policy goals (Thomas et al., 2003). Inefficiencies in the South African public health care are often misunderstood and overshadowed by the financing and payment processes. These problems will perpetuate unless these inefficiency issues are addressed before implementing reforms that require a significant increase in health budgets (Christian and Crisp, 2012).

In 2000, the Financial and Fiscal Commission (the Commission) proposed that health care funding should be based on norms, i.e. determined through the costed norms approach (FFC, 2000). This was seen as an efficient way to cost basic health services provided by provinces (i.e. PHC services), while the other health services would be covered in the basic element of the PES formula or conditional grants. The Commission also suggested that basic health services should include a complex bundle of different types of services that would be delivered by different providers, such as community health

centres (CHCs), clinics, district hospitals and provincial hospitals. Therefore, the costs of providing PHC services would vary according to the institution that offers the service. Costs would also be influenced by the degree of ruralness in a province, the incidence of poverty, disease profiles and the extent to which provinces can exploit economies of scale in service provision. At the time, government did not accept the recommendation to use the costed norms approach because of a lack of appropriate data for developing cost estimates, which would mean that policy norms used in developing cost estimates were likely to be ambitious and would lead to unaffordable expenditure projections.

This chapter assesses the adequacy and efficiency of PHC financing, but does not quantify the funding gap on PHC financing. Following a discussion of the methodology, the research findings are presented, after which concluding remarks and then some recommendations are made.

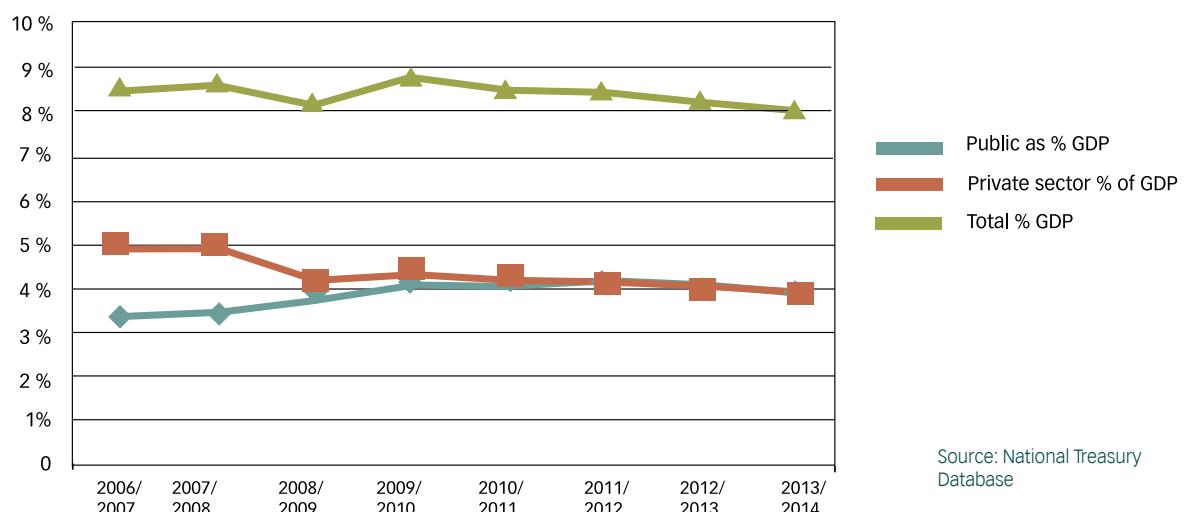
5.2 Methodology

To assess the adequacy, a case study approach was undertaken in carrying out a normative costing on PHC. The resource requirements/costs providing a minimum package of services at PHC centres need to be understood thoroughly in order to ensure adequate funding for the provision of services. The norms and standards used in the model were based on the package of essential services developed by the Gauteng Department of Health. In addition, international funding norms for health care were compared with the status quo on public health care funding in South Africa. Lastly, the budget analysis of the study was conducted using National Treasury's database, Expenditure Reviews, Estimates of National Expenditures, Budget Reviews and other related documents. This was done in order to ascertain the current budgeting and expenditure in the health sector. Further, in assessing efficiency and the spending pressures in the health care sector, the budget of each health care programme was analysed. The emphasis was on identifying inefficiencies through analysing incidences of under-spending/over-spending in capital payments and provincial programmes related to: employee compensation, good services and capital payments, administration, district health services, health care support services, health facilities, health sciences and training, emergency medical services, provincial hospital service and central hospital service, and conditional grants. In addition, efficiency indicators were selected and used to measure the performance of health care programmes at district level using the Health Systems Trust Database.

5.3 Health Care Services in South Africa

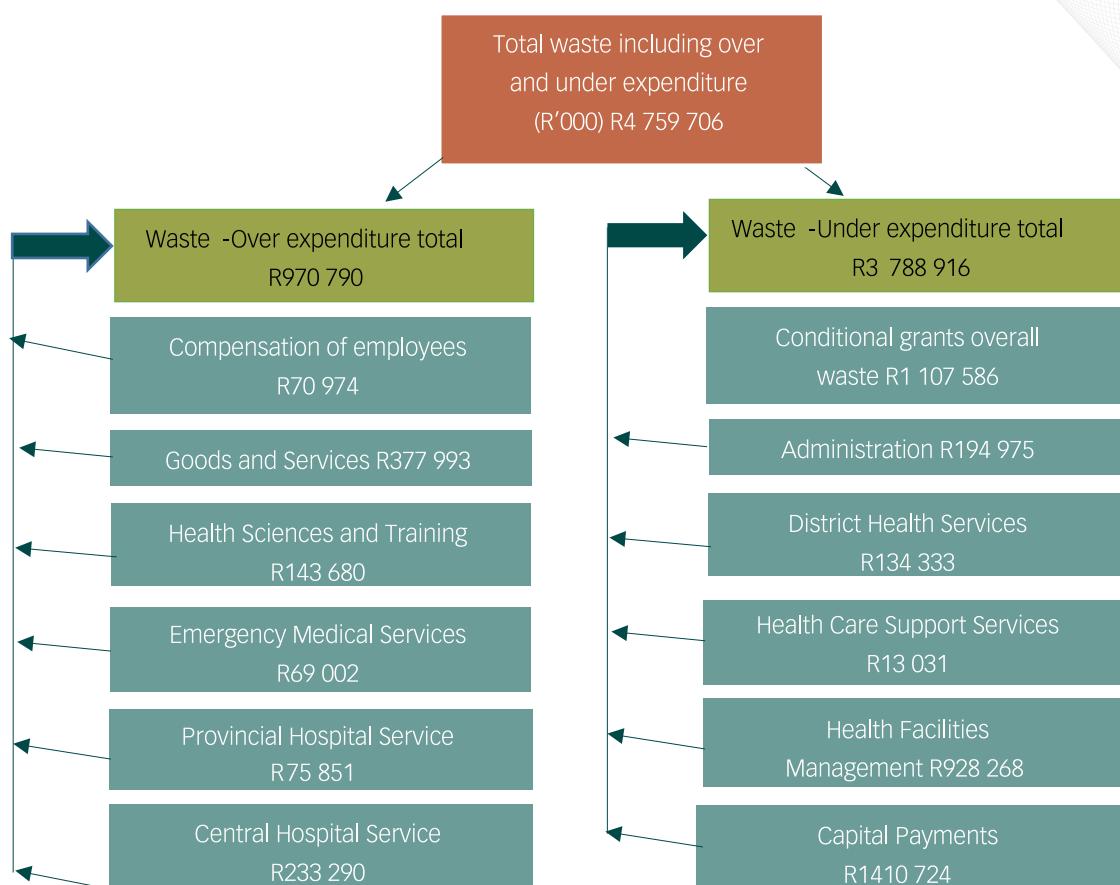
Between 2006/07 and 2013/14, health expenditure (private and public sector) amounted to just over 8% of South Africa's GDP (see Figure 17). However, if the private sector expenditure is excluded, public sector health expenditure as a percentage of GDP was 3.3% in 2006/07 and has been about 4% since 2009/10. This percentage is below the WHO recommendation of 5% of GDP on public health care (National Treasury, 2011).

Figure 17: Health expenditure as a proportion of GDP



International literature indicates that rising costs and inefficiencies result from among other things the over- and under-use of health care services (Kelly and Fabius, 2010; PwC Health Research Institute, 2010). These include expenditure on goods and services (e.g. medicines, medical and surgical consumables, laboratory services and patient food), staff turnover and non-adherence to treatment by patients, preventable hospital admissions, treatment variations, hospital-acquired infections, medical errors and over-prescription of antibiotics. South Africa is no exception. In 2012/13 close to R5-billion was recorded as wasteful expenditure in the sector (Figure 18), while inefficiencies observed include long average length of stay in hospitals, breakdown in the referral system and non-adherence to treatment by patients.

Figure 18: Estimation of wasteful expenditure in the public health care sector



Source: National Treasury Database (2012/2013)

Compared to peer countries (like Mexico, Argentina, Chile and Peru) with a similar level of income, South Africa performs poorly on health outcome indicators: infant mortality rate is worsening, and maternal and child mortality is higher (Harrison, 2009). In response, the health sector has prioritised four major health outcomes: improved life expectancy, reduction in the mortality rates of under-5 year olds, infants and mothers. Any improvements to these outcomes will depend largely on the provision of primary health care (PHC) services, which will help to prevent mother/child transmission of HIV/AIDS, reduce infant and child mortality, and improve life expectancy. PHC services are part of the district health services that are provided by provinces. The next section explore the state of provincial health care services, looking at the aggregate and provincial data.

5.4 Provincial health care services

5.4.1 District health care indicators

The following analysis focuses on district health care indicators used to measure how efficiently resources are being used. The indicators, based on routine data at facility level, are: bed utilisation, average length of stay, cost-per-patient-day, immunisation rates and supervision rates (Monticelli and Barron, 2007).

The **bed utilisation indicator** measures how efficiently hospitals are using their resources (beds). If the average bed utilisation rate is low, either the hospital (its beds) is not needed in that area, or communities do not want to use that particular type of hospital service because of perceptions of poor quality (Monticelli and Barron, 2007). If bed utilisation rates are high, then either patients spend too much time in hospital and are not being discharged, or the number of beds are insufficient. The national Department of Health (DoH) sets the average bed utilisation rate at 75%. As Table 15 shows, with the exception of the Western Cape, all provinces show bed utilisation rates below this rate, which implies that provincial departments are not meeting the targets set by the national department. This means that either communities are not using the service because of perceived poor quality, or patients are choosing to go to the next level of care (i.e. regional hospitals), resulting in inefficiency in the system, as these resources could have been used elsewhere.

Table 15: Bed utilisation rate – district hospitals

	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11
Eastern Cape	61.3	62.6	65.5	70.3	71.0	65.1
Free State	70.1	67.3	67.7	67.5	66.2	62.6
Gauteng	62.4	66.0	64.5	65.1	66.8	62.0
KwaZulu-Natal	63.1	63.6	61.3	62.7	64.5	63.2
Limpopo	66.8	67.3	64.3	68.1	67.0	64.6
Mpumalanga	62.8	64.3	70.2	74.6	67.7	65.9
Northern Cape	65.0	65.5	66.0	64.6	61.6	62.9
North West	59.1	57.5	58.0	58.6	60.9	60.6
Western Cape	78.7	80.4	81.0	81.1	77.6	76.7
South Africa	64.4	65.2	65.3	67.7	67.5	64.8

Source: Health Systems Trust Database, District Health Barometer (2010)

The **cost-per-patient-day indicator** measures the cost per patient on a particular day, by comparing the hospital's total expenditure with service outputs (i.e. in-patients or out-patients). According to Monticelli and Barron (2007), if the rate is higher than the target, then either hospital services are under-utilised, which may mean inadequate control of costs (over-use of expensive medicines or over-servicing of patients), performing unnecessary tests (e.g. expensive lab tests) or wasting resources such as food, equipment, medicine and consumable items. In 2006/07, the national DoH recommended a cost-per-patient-day of R814. However, the cost-per-patient-day in all provinces (excluding the Western Cape) was higher than that set by the department (see Table 16).

Table 16: Cost-per-patient-day equivalent – district hospitals (Rand)

	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11
Eastern Cape	987	1 072	1 079	1 114	1 277	1 469
Free State	1 182	1 207	1 142	1 349	15 64	1 612
Gauteng	1 259	1 337	1 401	1 406	1 671	1 996
KwaZulu-Natal	1 009	963	1 133	1 210	1 192	1 287
Limpopo	1 199	1 283	1 371	1 338	1 494	1 732
Mpumalanga	1 363	1 413	1 242	1 340	1 595	1 704
Northern Cape	1 063	1 094	1 270	1 257	1 384	1 575
North West	1 136	1 194	1 387	1 402	1 553	1 655
Western Cape	751	746	1 143	1 195	1 386	1 535
South Africa	1 074	1 109	1 203	1 256	1 384	1 543

Source: Health Systems Trust Database, District Health Barometer (2010)

Another indicator considered is the **immunisation rate**, which measures the proportion of infants under one year who have completed their course of immunisation. Immunisation plays a critical role in decreasing child mortality. The national DoH has set a target of 90%, which only certain provinces have achieved since 2005/06 (see Table 17). What is of concern is that between 2009/10 and 2010/11 the immunisation rate fell in all provinces (apart from KZN), while five provinces (Free State, Mpumalanga, Northern Cape, North West and the Western Cape) had a lower rate of immunisation in 2010/11 than in 2005/06.

Table 17: Immunisation rates

	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11
Eastern Cape	73,35	75,7	78,9	81,8	90,2	76,9
Free State	86,82	88,1	86,6	84,3	86,5	83,3
Gauteng	88,89	91,1	91,6	109,9	108,6	107,7
KwaZulu-Natal	82,57	84,5	82,1	82,6	82,7	83,0
Limpopo	79,49	84,9	78,6	91,0	99,3	90,8
Mpumalanga	83,39	81,4	78,5	82,5	89,8	67,9
Northern Cape	92,88	96,2	82,6	89,4	88,0	87,8
North West	78,20	73,5	77,9	83,1	85,1	75,9
Western Cape	91,61	101,8	100,5	100,9	99,6	87,3
South Africa	82,94	85,4	84,2	90,2	93,2	86,7

Source: Health Systems Trust Database, District Health Barometer (2010)

Lastly, the **supervision rate indicator** measures the number of PHC centres (clinics and community health centres) visited by a supervisor monthly. It is calculated as the total number of PHC centres visited by a supervisor at least once a month divided by the total number of PHC centres. The DoH's target is 100%, but none of the provinces have reached this target. As Table 18 shows, in 2010/11, only Gauteng and the Eastern Cape had supervision rates of over 80%. At 19.6%, the Northern Cape's rate was the lowest of all provinces, followed by the North West at 56.9%. This is worrying, given that the PHC is the fundamental requirement to improve health outcomes in line with the MDGs, and the supervisor is the middleman between decisions made by government and the facility.

Table 18: Supervision rate

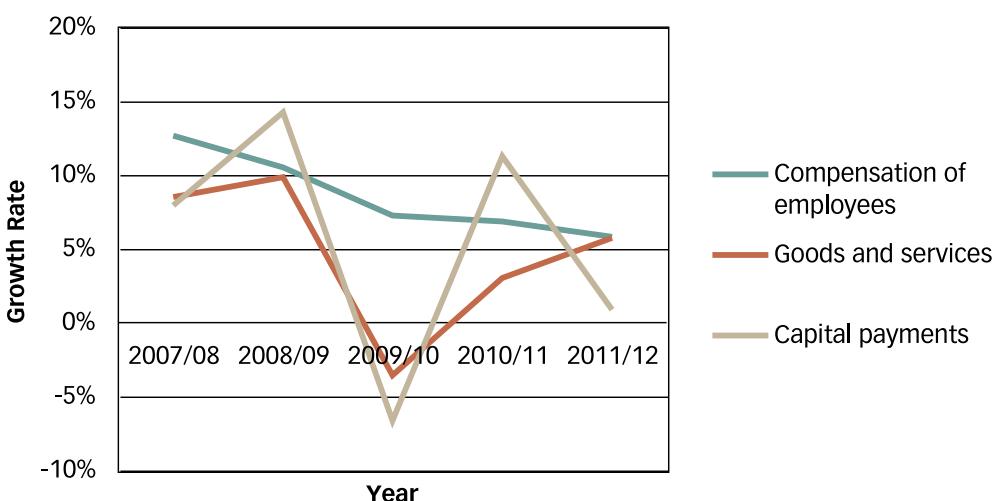
	2006/07	2007/08	2008/09	2009/10	2010/11	2010/11
Eastern Cape		48,2	74,8	81,3	81,0	1 469
Free State	37,2	48,9	63,4	73,3	65,1	1 612
Gauteng	52,0	58,2	74,2	79,2	81,3	1 996
KwaZulu-Natal	51,6	58,8	59,8	67,8	61,7	1 287
Limpopo	57,4	58,7	66,9	67,4	65,0	1 732
Mpumalanga	24,8	26,8	43,7	74,7	76,2	1 704
Northern Cape	29,8	20,9	30,2	24,1	19,6	1 575
North West	46,3	46,1	46,3	51,6	56,9	1 655
Western Cape	30,8	33,7	59,6	72,3	74,8	1 535
South Africa	44,2	48,2	61,9	69,9	68,8	1 543

Source: Health Systems Trust Database, District Health Barometer (2010)

5.4.2 Growth of provincial health care budgets

When health budgets were analysed by economic classification (compensation of employees, goods and services and capital assets), some concerning findings emerged.

Figure 19: Real growth rates by economic classification



Source: Own Calculations based on National Treasury Database (2007/08–2011/12)

As Figure 19 shows, between 2007/08 and 2011/12, real growth rates decreased overall for the three economic classifications: by 7% for compensation of employees, 2% for goods and services and 7% for capital payments. Some of the reasons for this include unsustainable wage growths, backlogs in payment of suppliers for goods and services, and delays in completing capital projects. This is a concern especially for capital expenditure, as infrastructure has been identified as a priority for enhancing the effectiveness of the health system.

Decreases in real growth rates have also been recorded at the provincial level, and in some cases negative growth rates occurred: in 2009/10, administration and health training and sciences was -5%, while health care support -4% (see Tables 19 and 20).

In 2005/06, provincial district health services grew at 9% but had dropped to 4% by 2010/11. This is a concern given that district health services are considered a key component for strengthening PHC and improving health care services.

Table 19: Provincial health expenditure growth rates (real) by programme (2005/06–2010/11)

	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11
Administration	-9%	11%	-2%	15%	-5%	-1%
District Health Services	9%	8%	13%	2%	3%	4%
Emergency Medical Services	24%	10%	13%	7%	6%	3%
Provincial Hospital Services	6%	5%	4%	-1%	4%	3%
Central Hospital Services	10%	1%	-1%	-5%	4%	4%
Health Training and Sciences	20%	7%	10%	12%	-5%	0%
Health Care Support Services	28%	0%	12%	5%	-4%	6%
Health Facility Management	31%	29%	9%	24%	8%	6%
Total	10%	7%	7%	3%	3%	3%

Source: Own Calculations based on National Treasury Database (2005/06–2010/11)

Table 20: District health services expenditure growth rates (real) by province (2005/06–2010/11)

	2006/07	2007/08	2008/09	2009/10	2010/11	2010/11	Average growth 2005/06 - 2010/11
Eastern Cape	8%	6%	22%	6%	10%	2%	9%
Free State	7%	1%	8%	14%	8%	3%	7%
Gauteng	8%	23%	10%	19%	13%	7%	13%
KwaZulu-Natal	2%	24%	4%	5%	-1%	1%	6%
Limpopo	15%	5%	17%	9%	7%	5%	10%
Mpumalanga	6%	22%	10%	18%	9%	3%	11%
Northern Cape	17%	34%	3%	11%	15%	-4%	13%
North West	6%	-3%	11%	10%	2%	2%	5%
Western Cape	11%	30%	7%	10%	9%	3%	12%

Source: Own Calculations based on National Treasury Database (2005/06–2010/11)

Per capita expenditure can provide an indication of whether funding inequities or imbalances exist in the system. Table 21 shows significant variations in per capita expenditure across provinces. In 2010/11, the average national expenditure per capita was R514, but the variation among provinces ranged from R430 (in Free State and KZN) to R631 (in the Western Cape).

Table 21: PHC (non-hospital) expenditure per capita (Rand)

	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11
Eastern Cape	318	329	347	440	458	571
Free State	321	325	295	340	384	430
Gauteng	345	371	377	413	500	549
KwaZulu-Natal	303	315	357	375	381	430
Limpopo	259	272	344	425	473	508
Mpumalanga	223	257	296	321	361	445
Northern Cape	297	348	433	436	450	592
North West	357	378	387	428	455	519
Western Cape	431	451	491	516	588	631
South Africa	319	337	367	410	451	514

Source: Health Systems Trust Indicators, District Health Barometer (2010)

An analysis of expenditure per patient visit (Table 22) also found variations among the provinces. In 2010/11, the expenditure per patient visit ranged from R146 in KZN to R214 in Gauteng, compared to the national average of R176.

Table 22: PHC (non-hospital) expenditure per patient visit (Rand)

Province	Jun-05	Jul-06	Aug-07	Sep-08	Oct-09	Nov-10
Eastern Cape	116	118	125	148	147	190
Free State	130	133	121	127	139	158
Gauteng	154	148	183	176	201	214
KwaZulu-Natal	135	132	147	142	134	146
Limpopo	89	91	120	138	149	174
Mpumalanga	91	104	125	127	141	172
Northern Cape	95	108	129	124	131	170
North West	119	134	147	153	161	192
Western Cape	124	138	150	140	153	166
South Africa	122	126	142	146	154	176

Source: Health Systems Trust Indicators, District Health Barometer (2010)

Two underlying factors help explain these variations in expenditure among provinces. The first is that no mechanisms are in place to guide how funding should be channelled, including funding norms that explicitly states funding requirements for each programme (Thomas et al., 2003). The second is that provinces are delivering PHC inefficiently, at district hospitals rather than at clinics or community health centres, which implies that clinics are under-used and hospitals are over-used. For example, Gauteng acknowledges that health services tend to be predominately hospital-based because their PHC is not fully functional and their referral system is inadequate (Gauteng Provincial Government, 2012).

Gauteng Case Study

In 2008 the Gauteng DoH commissioned a study to determine the cost of providing the package of essential PHC services, based on the norms and standards developed by the national department. The Primary Health Care Package (DoH, 2000) contains norms and standards for PHC, which serve as guidelines for provinces to allocate resources and for district and local practitioners to assess their performance and needs of their population. The core standards are shown below:

PHC core standards

Equipment	Medicines and Supplies	Competent staff	References, prints and educational materials
Diagnostic tests, blood pressure machines , emergency transport available, oxygen cylinder, scales, disposal and sterilisation system, adequate consulting rooms etc.	Medicine room and cupboards , medicine and supplies as per the essential drug list , available electricity and water etc.	Staff that is able to: map clinic catchment area and achievable PHC objectives, reduce waiting times to a minimum and implement district focused and community based initiatives etc.	Standard treatment guidelines and essential drug list manual, health library with medical and nursing reference books and national and provincial health related circulars etc.

Source: National Department of Health, The Primary Health Care Package- Set of Norms and Standards (2000)

The Gauteng DoH study was carried out in 20 PHC facilities – both clinics and community health centres (CHCs). The **actual cost** are costs already incurred and measured, while **normative costs** are the estimated projected costs if the comprehensive PHC package were funded based on a norm.

Actual Costs versus Normative Costs for PHC Services

PHC Package Service	Actual Costs			Normative Costs		
	Average Unit cost per PHC visit per service (clinic & CHC combined)	Unit cost per CHC visit per service	Unit cost per Clinic visit per service	Average Unit cost per PHC visit per service (clinic & CHC combined)	Unit cost per CHC visit per service	Unit cost per Clinic visit per service
Integrated management of childhood illness (MCI)	R54.52	R103.42	R35.72	R76.20	R79.94	R72.46
Reproductive Health	R56.11	R96.83	R38.87	R65.32	R75.13	R55.51
Curative Services	R75.57	R108.37	R45.43	R77.72	R78.47	R76.97
Home visits	R75.66	R82.25	R28.92	R51.46	R55.04	R47.87
HIV/AIDS	R135.49	R172.45	R86.43	R208.69	R296.43	R120.96
Emergency Care	#	#	#	R59.69	R63.32	R56.05
Mental Health	R84.12	R165.18	R56.44	R62.17	R74.22	R50.11
Oral Health	R90.53	R125.56	R57.57	R53.71	R57.30	R50.11
Rehabilitation	R68.74	R72.07	R46.24	R55.04	R55.04	#
Medico-Legal Services	R96.26	R112.85	R52.99	R79.86	R79.86	#
School Health	R89.71	R90.23	R65.02	R55.04	R55.04	#
Minor surgery	#	#	#	R71.87	R71.87	#
Radiography	#	#	#	#	R0.00	#
Optometry	#	#	#	R71.87	R71.87	#

Source: Field Survey, Gauteng Case Study. # No costs estimated because of the unavailability of data

The average cost of primary health services (CHC and clinics combined) was found to be R75.54. The average cost per visit to CHCs was higher than the cost per visit to a clinic. Average actual costs per visit to CHCs ranged from R172.45 (for HIV/AIDS) to R72.07 (for rehabilitation) compared to average costs to clinics, which ranged from R86.48 (for HIV/AIDS) to R28.92 (for home visits). The four highest cost services for CHCs and clinics were HIV/AIDS, mental health, oral health and medico-legal services. The average normative costs per visit to CHCs ranged from R296.43 for HIV/AIDS to R55.04 for rehabilitation per visit and at clinics ranged from R 120.96 for HIV/AIDS to R28.92 for home visits.

Based on the combined average normative costs of PHC services, the study found that over R1-billion will be required to provide primary healthcare services.

Normative costs for providing PHC services in Gauteng

Average Costs/ patient	Total number of patients	Total Costs
Total PHC Costs	R46.70	11 110 242
Total CHC Costs	R111.30	3 728 022
Combined PHC Costs (CHC+Clinics)	R75.54	14 838 264
		R1 120 882 462.56

5.5 Conclusion

Despite increased spending, the public health sector in South Africa is facing many challenges, such as a heavy disease burden and a growing uninsured population. Compared to similar developing countries, South Africa performs badly on health outcome indicators, such as infant mortality rate. Debates about whether the public health sector is under-funded often overshadow the inequities and inefficiencies that exist within the South African health care system. Public health care spending accounts for 14% of total government expenditure and represents about 4% of the GDP, which is below the international standard recommended by WHO, although if the private sector health care spending is included, the percentage rises to 8% of GDP. In South Africa, provinces account for about 90% of total public health care spending, or close to R100-billion in real terms. Health budgets will increase significantly when the proposed NHI is introduced and so, unless the inefficiency issues are addressed, the problems will continue.

The research found the rate of growth of provincial health expenditure has been decreasing, while funding and spending inequities persist across provinces. Explanations for these variations are (1) the lack of alignment between funding and norms and (2) provinces delivering PHC inefficiently, for instance at hospitals instead of at clinics or CHCs. Using four district health care indicators to measure how efficiently resources are being used (bed utilisation, average length of stay, cost-per-patient-day, immunisation rates and supervision rates), in most cases provinces are not meeting the standards set by the national DoH. These inefficiencies are due to a weak institutional framework and poor resource planning (because of an absence of norms). To address this will require fundamental institutional reforms and improved funding levels.

5.6 Recommendations

With respect to improving adequacy and efficiency in primary health care financing, the Commission recommends that:

1. Provincial governments increase their allocation levels to PHC funding, to be in line with the minimum norms and standards for the PHC package set by the National Department of Health, in particular on clinic services such as integrated management of childhood illnesses, reproductive health and HIV/AIDS.
2. Inefficiencies (wasteful/irregular expenditure) in the health sector are minimised to be in line with international experience: Wasteful expenditure needs to be identified, categorised and addressed:
 - a. clinical waste, through clinical performance measures that promote efficient use of resources (cost effectiveness, research and information dissemination).
 - b. operational waste, through measures such as standardisation of system processes and procedures
 - c. behavioural waste, through measures such as preventative services advocacy so as to avoid unnecessary complications or illnesses.

CHAPTER 6

Impact of Fiscal Expenditure on Food Security

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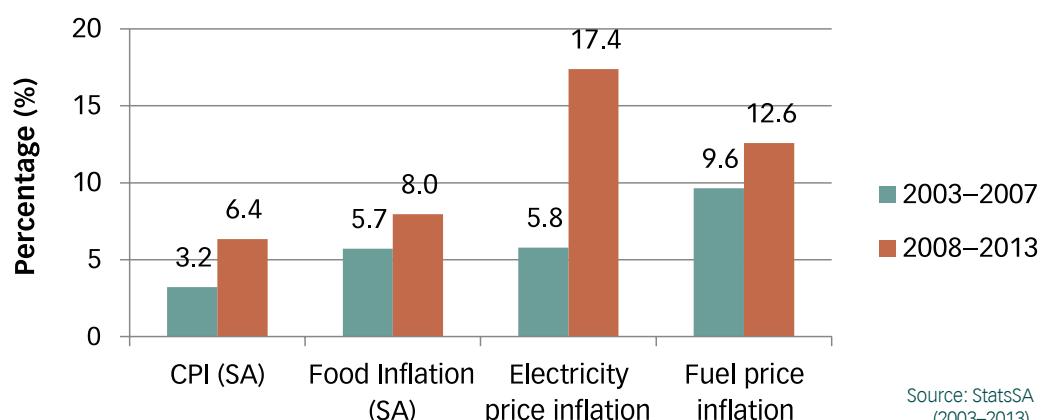
6.1 Introduction

Food security is when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life (FAO, 2009). This means (i) having access to food that is safe and nutritious and (ii) having the ability to acquire food in a socially acceptable way. Conversely, food insecurity is when food is not easily available and households have difficulty securing adequate food. Food insecurity at a household level can be transitory or chronic. Transitory food insecurity is temporary in nature and caused by climatic or economic shocks, resulting in a decrease in household purchasing power. Chronic food insecurity is more long term in nature and linked to chronic lack of livelihood strategies and assets. Food insecurity can also be at a national, regional or community level. Food security at a household level is largely influenced by livelihood strategies of individuals rather than total agro-food output (Altman, Hart and Jacobs, 2009).

The Constitution²² clearly states that everyone has the right to have access to sufficient food and water (RSA, 1996), with special protection provided to those who cannot access food through their own means, for example children and prisoners. Therefore, government must ensure food security. Government functions that relate to food security include agriculture, health services, environmental services, welfare services, urban land reform and rural development. Schedule 4A of the Constitution classifies these functions as concurrent competencies between national and provincial spheres; in other words, national and provincial governments share responsibility for these functions. National or provincial government can also assign these functions to municipalities, provided the function can be implemented more effectively at local level. Local-level functions that contribute to food security and nutrition (as listed in Schedule 4B of the Constitution) are municipal planning, water and sanitation, and health services. Municipal planning is a crucial function, especially in light of increasing urban populations and pressure to use agriculture land for other purposes²³. Municipalities can support food security initiatives by setting aside land in urban or peri-urban areas to encourage small-scale agricultural production.

The economic crisis in 2007/08 has brought food security to the forefront of policy discussions. Policy-makers are concerned about the effect on households of the sudden increase in commodity prices. At the same time, as Figure 20 shows, food inflation has risen faster than the consumer price index (CPI). This affects poor households the most because they spend a larger share of their household incomes on food compared to other income groups.

Figure 20: Average increase in commodity prices (South Africa)



²² Sections 27(1) (b), 28(1) (c) and 35(2) (e) are all provisions in the Constitution that deal with the right to food.

²³ Refer to landmark case study on the Philippi Horticultural Area in Cape Town (Battersby-Lennard and Haysom, 2012).

The government's policy response to these macro-economic shocks reflects a preference for a supply-side approach and stimulating small-scale agriculture development and agro-processing industries.²⁴ The National Policy on Food and Nutrition (DAFF, 2013b), which includes the Household Food and Nutrition Security Strategy, and the FetsaTlala Food Production strategy (DAFF, 2013a) are policy reforms aimed at strengthening the implementation of the Integrated Food Security Strategy (IFSS) (Department of Agriculture, 2002). The major weakness of the IFSS was that it was implemented in a disjointed and fragmented way by government departments. The National Policy on Food and Nutrition Security and the FetsaTlala strategy have a similar implementation structure, but the political responsibility for coordinating the implementation of the overall food security initiatives is escalated to the Office of the Deputy President and to provincial premiers' offices, with technical support (on programme planning, monitoring and evaluation) from coordinating units at national and provincial level.

Another weakness was that the IFSS views food security largely through a rural lens, as poverty and inadequate livelihoods tend to be concentrated in rural areas²⁵. This rural focus means that cities do not have a mandate to address food insecurity, which could lead to policies and by-laws undermining urban food security (Battersby-Lennard and Haysom, 2012). For example, informal traders play an important role in the food chain of food-insecure households, but municipal by-laws (and health and safety regulations) may inadvertently discourage the growth of informal traders (Battersby-Lennard and Peyton, 2014). The National Policy on Food and Nutrition Security and the FetsaTlala strategy attempt to address urban food insecurity but propose interventions that assumes homogeneity, whereas food security in rural and urban areas has different characteristics.

Recent policy reforms suggest that government wants to encourage self-reliance as a means of enhancing livelihoods of poor families. With the need for fiscal consolidation, the government will have to make budgetary trade-offs in the future²⁶. One potential trade-off is between spending on social grants and on other strategic priorities, such as education, infrastructure and job-creation initiatives. In an uncertain macro-environment, government's response to household vulnerability and long-term food sustainability issues will be crucial to ensure the constitutional right to access food is protected. Therefore, a careful examination is needed to assess the impact (if any) of these spending programmes on household food insecurity.

A critical shortcoming in the existing policy framework is the lack of understanding of how different government interventions have affected levels of food security. Such an understanding will enable government to make informed decisions when allocating budgets to food security programmes. The disjointed implementation of food security interventions is also a major challenge. Currently, different line ministries at different levels of government implement food security programmes. No single department is responsible for all the food security and nutrition programmes, which is largely because of the multi-faceted nature of food security and the need for a multidimensional approach. The danger is that departments only take responsibility for their programmes and fail to plan and implement programmes holistically, resulting in overlapping activities and inefficient implementation.

This chapter investigates the impact of public spending (in particular in the agricultural sector) on the level of household food security, to assess whether government's current approach is the most effective, and assesses the intergovernmental arrangement. After discussing the methodology used, the research findings are presented and then, following concluding remarks, recommendations are made for improving the impact of public expenditure on food security.

6.2 Methodology

Semi-structured interviews were held with senior officials in various sector departments to find out about the food security interventions and to understand some of the implementation challenges, especially in relation to fiscal impacts and coordination weaknesses. The Comprehensive Agricultural Support Programme (CASP) was used as a case study to explore systematic intergovernmental coordination challenges. A structured conceptual framework was developed to analyse the impact of selected government programmes on food security and how food security programmes affect different households. The framework comprised a probit model²⁷, a computable general equilibrium (CGE) model²⁸ and a data envelope analysis (DEA) model²⁹. Figure 21 summarises the different models used.

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²⁴ A supply-side approach denotes a country's ability to produce enough food either through domestic agricultural production or food imports.

²⁵ Two targeted surveys administered in 2000 and 2008 reveal that in low income areas, urban food insecurity is as much a problem as rural food insecurity (Battersby-Lennard and Haysom, 2012).

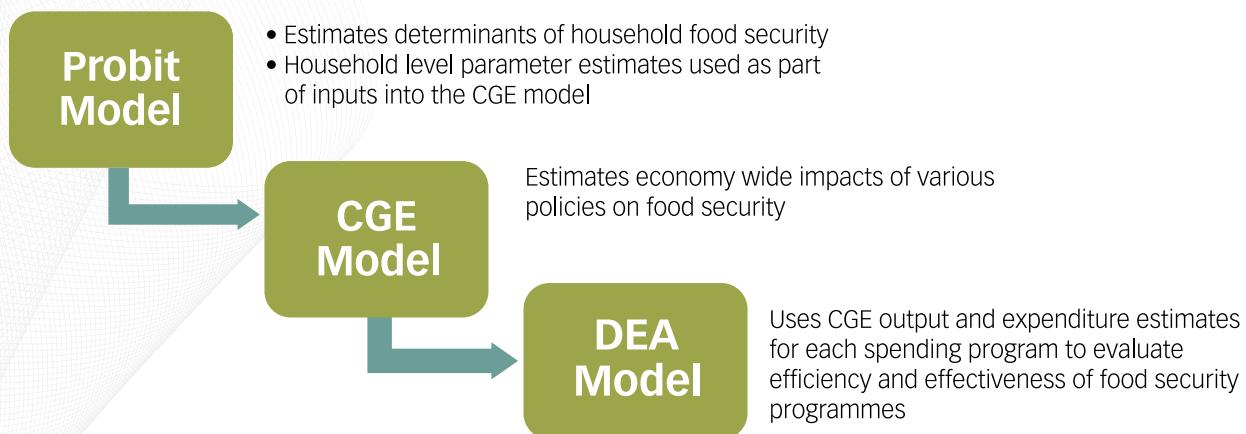
²⁶ Fiscal consolidation is a policy stance aimed at reducing government deficits and debt accumulation (OECD, 2001).

²⁷ This is used to understand the household food security drivers and the contribution of various social grant programmes.

²⁸ This is used to evaluate the induced changes of food security spending programmes on household food security. The model simulates changes in household food commodities expenditure, total consumption and changes in income caused by various household food security improvement programmes.

²⁹ This is used to evaluate and rank the efficiency of each food security programme.

Figure 21: Methodology for measuring impact of food security programmes

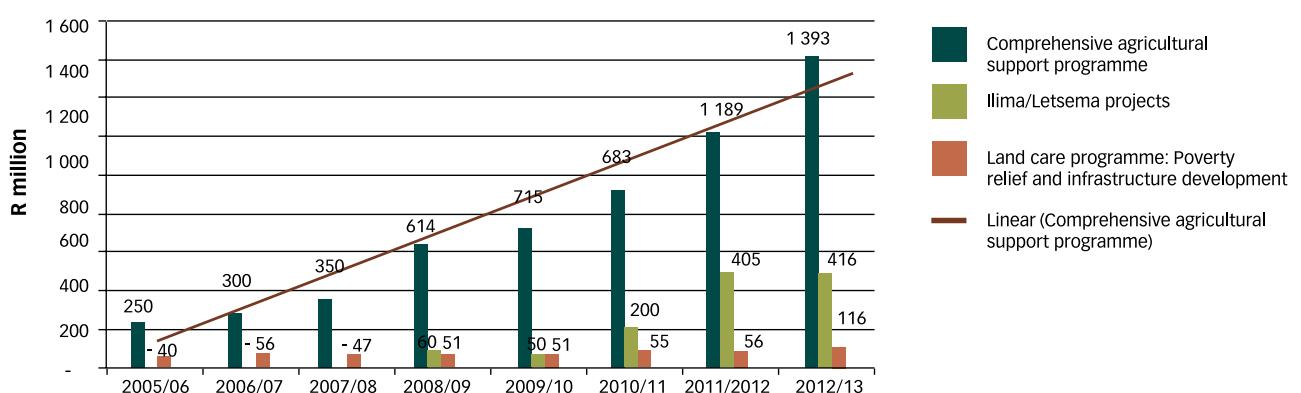


Source: Author (2014)

6.3 Funding of Food Security

The national Department of Agriculture, Forestry and Fisheries (DAFF) is the transferring agent for the three agriculture conditional grants, while provincial departments are responsible for implementing and reporting to DAFF on the spending of these grants. Figure 22 shows expenditure for the agriculture conditional grants for the period 2005/06 to 2012/13.

Figure 22: Expenditure on agriculture conditional grants (2005/06–2012/13)



Source: National Treasury Database.

Over the seven-year period, spending on the CASP grant increased five-fold, reflecting government's move to promote job creation in rural areas and to redress past discrimination by supporting emerging farmers. The ILIMA/Letsema grant also increased noticeably (by more than R200-million between 2010/11 and 2011/12), as government redirected funds to boost food production by investing in irrigation schemes and supporting beneficiaries with starter packs and production inputs. Provinces spent R116-million on the land care programme, which funds capacity-building programmes, as well as the rehabilitation and protection of natural resources. For the period 2009/10–2012/13, government spent close to 100% of the land care programme grant and 95% of the ILIMA /Letsema grant, which was generally good, whereas only 90% on average of the CASP grant was spent.

As Table 23 shows, over the past decade provincial agricultural expenditure has more than tripled, increasing from R2.84-billion in 2001/02 to R9.2-billion in 2011/12; per capita spending increased from R591 to R1975. Per capita spending is highest in provinces with a large rural population such as Limpopo (R275) and North West (R222), compared with Gauteng (R42) and the Western Cape (R90) where a strong urban core is present. The variation in per capita spending reflects each province's priorities and agricultural sector strategy according to its Provincial Growth Plan, which is used for long-term resource allocation.

Table 23: Shifts in provincial agriculture expenditure (2001/02–2011/12)

	Agric. Spending 2001/2 (R m)	Agric. Spending 2011/12 (R m)	Per Capita Spending 2001/2	Per Capita Spending 2011/12	Per Capita Increase
Eastern Cape	563 298	1 486 047	86.84	224.86	138.02
Free State	1 195 99	491 925	43.38	177.65	134.27
Gauteng	110 684	516 645	12.18	42.82	30.64
KwaZulu-Natal	655 185	2 481 989	68.75	241.76	173.01
Limpopo	581 395	1 498 867	113.80	275.73	161.94
Mpumalanga	336 256	959 177	93.73	237.09	143.36
Northern Cape	56 446	511 890	55.27	462.30	407.04
North West	305 561	778 609	93.07	222.67	129.61
Western Cape	114 357	516 712	24.91	90.36	65.45
Total	2 842 781	9 241 861	591.93	1 975.25	1 383.32

Source: Own Calculations, National Treasury Database.

Expenditure on agriculture is just one aspect of food security, which is multi-faceted and requires a multidimensional approach. Currently, all three government spheres fund and implement non-agricultural programmes that contribute to food security (Table 24).

Table 24: Food security-related programme expenditure

Programme	Sphere	2012/13 (R'000)	2013/14 (R'000)	2014/15 (R'000)	2015/16 (R'000)
School Nutrition Programme	Provincial	4 950 557	5 1730 81	5 461 915	5 703 715
EPWP	Provincial	510 160	615 000	607 000	625 000
	Local	662 130	611 000	632 000	661 000
CWP	National	1 448 900	1 731 330	2 257 840	2 505 410
Social grants	National	63 426 900	66 248 200	71 178 800	75 355 000
Nutrition	National	22 216	23 062	21 768	22 852
	Provincial	269 158	247 558	276 459	293 344
Total		71 290 021	74 649 231	80 435 782	85 166 321

Source: Own Calculations, National Treasury Database

Interviews were conducted with selected sector departments in order to understand the food security interventions being implemented in each sector and to identify implementation challenges encountered. The results from the interviews are summarised in Table 25, on page 84.

Table 25: Food security programmes and implementation challenges

Sector	Food Security Interventions	Implementation Challenges	Implementation Strategy
Health	Nutrition security is this sector's focus area. Key interventions include breastfeeding support and promotion, supplementation, nutrition therapeutic programmes, management of acute malnutrition, clinical dietetic services and nutrition education and food safety. The sector also plays an advisory role to other sector departments.	<ul style="list-style-type: none"> Inadequate funding to expand community-based initiatives, especially to pregnant mothers and children under the age of two years. Upskilling of health care personnel on key nutritional interventions. 	District, provincial, national and NGOs.
Social Development	The main food security intervention is feeding programmes offered through social welfare programmes in centre-based facilities, such as community kitchens, early childhood development centres, aftercare facilities, etc.	<ul style="list-style-type: none"> Successfully exiting people from the support programmes. Funding constraints have led to financial cuts to NGOs implementing food security programmes. 	Local, provincial, NGOs.
SASSA	Cash transfers to beneficiaries. Food parcels and food vouchers provided to beneficiaries of social relief grant.	<ul style="list-style-type: none"> Interventions do not address long-term socio-economic challenges. Amount allocated to social relief grant is small compared to other grants and only applies for three months. 	National agency, provincial and service provider.
COGTA	Through the community works programme (CWP), work opportunities are created and income earned for the unemployed. Projects such as food gardens, cleaning, maintenance, home-based care etc. are identified as work sites.	<ul style="list-style-type: none"> CWP is not yet a permanent structure in the department. Reporting lines are not streamlined, with COGTA having to report to the Department of Public Works and National Treasury. Food gardens cannot grow in some areas because of water scarcity. 	National, NGOs.
Public Works	The Expanded Public Works Programme (EPWP) provides poverty and income relief by offering temporary job opportunities to unemployed. Activities include food gardens, infrastructure projects, community-based care, and rehabilitation of wetlands among others.	<ul style="list-style-type: none"> Spending is low in some EPWP programmes because of poor planning. Coordination can be improved across various sectors and spheres of government. 	National, provincial, local, NGOs.
Education	The National School Nutrition Programme provides meals on a daily basis to learners at schools. Nutrition education and food gardens are also provided.	<ul style="list-style-type: none"> Centralised model leads to implementation inefficiencies, especially delayed procurement processes. The budget allocated does not match the poverty profile. Lack of capacity at district level, which compromises the monitoring of the programme. 	National, provincial and NGOs

Table 25: Food security programmes and implementation challenges (continued)

Sector	Food Security Interventions	Implementation Challenges	Implementation Strategy
Rural Development and Land Reform	The recently started recapitalisation and development programme is intended to increase food production and job creation by supporting small commercial farmers. The department also processes land claims and settles people on land for productive activity. The department is meant to work closely with DAFF in supporting new land claimants to turn land into a productive asset through small-scale farming.	<ul style="list-style-type: none"> Inadequate post-settlement support hampers efforts to turn land into a productive asset. The land reform process is costly and behind target. The focus on smallholder farming and food production in the recapitalisation and development programme may be duplicating similar interventions by DAFF. 	National, provincial and NGOs
Agriculture, Forestry and Fisheries	Responsible for supporting farmers through a full package of services, such as financial support, infrastructure development, veterinary services and capacity building among others.	<ul style="list-style-type: none"> Inadequate supply of water, mining activities and climate change limit existing agricultural land. Poor planning and delays in procurement. Lack of youth participation and farmer training. Inadequate monitoring and evaluation. Poor leveraging with other stakeholders. 	National, provincial and private providers
Municipalities	Municipalities provide zoning rights for economic development (including productive agriculture), implement food safety standards, provide nutrition services at local clinics and implement poverty alleviation initiatives such as provision of food parcels and food gardens.	<ul style="list-style-type: none"> Municipalities do not have a clear mandate on food security. The function is split across many departments, creating a fragmented approach to food security delivery in municipalities. No integrated strategy on food security, which means accountability and responsibility for food security are not clearly defined. 	Metros, districts and local municipalities

Source: Author (2014)

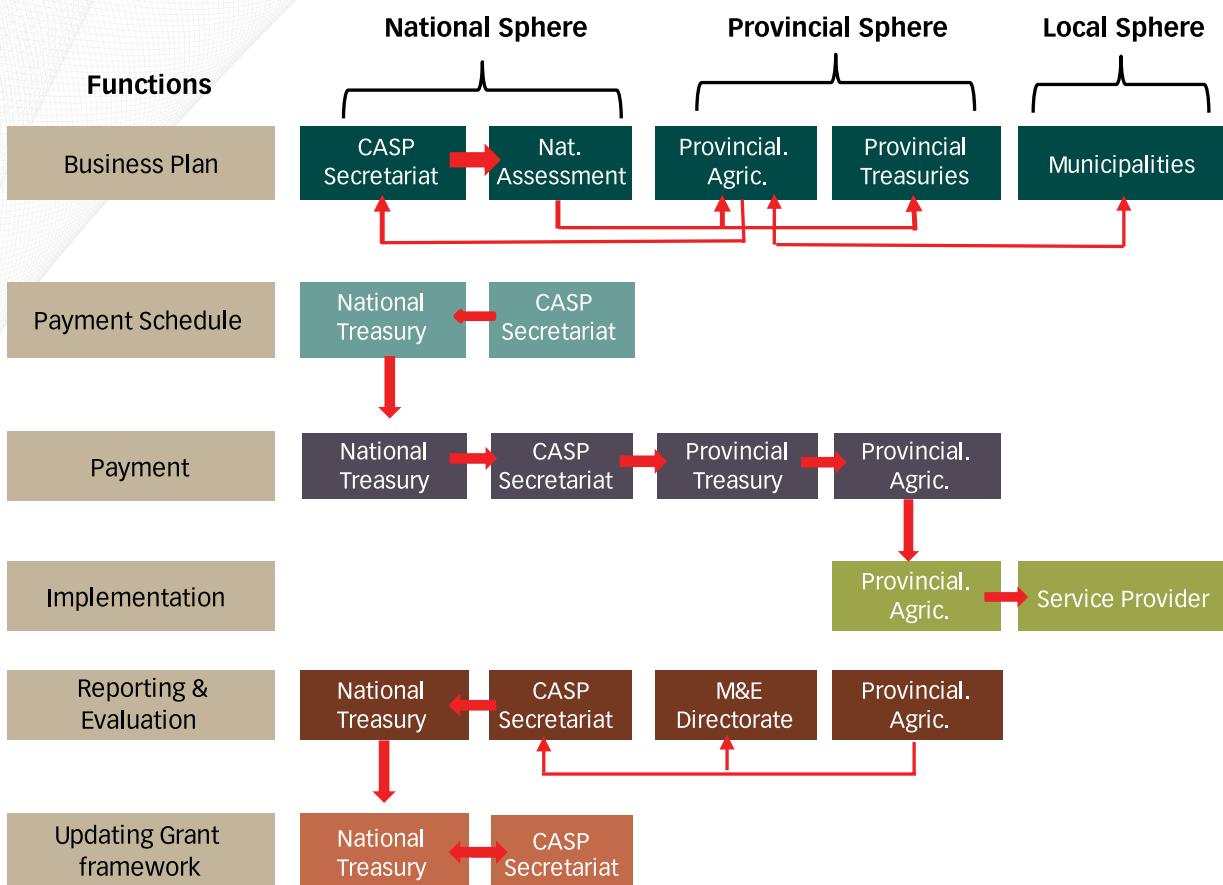
While each sector focuses on its own dimension of food security, programme interventions appear to take place in isolation, as overlaps are apparent in a number of cases. For example, many sector departments have identified food gardens as an important intervention to combat household food insecurity, yet no national strategy is in place to coordinate, upscale and synthesise efforts across sectors and spheres. This confirms feedback received from interviews that the existing Integrated Food Security task team, which is meant to coordinate food security delivery in South Africa, has not been effective. Evidence suggests DAFF and the Department of Rural Development and Land Reform (DRDLR) could further strengthen coordination, especially to smallholder farmers, and provide adequate post-settlement support to land reform beneficiaries.

Even though food security-related programmes implemented by sector departments do not involve municipalities, many municipalities include food security interventions as part of their poverty alleviation, food safety and economic development initiatives. The food security function is spread across various directorates within a municipality, with no unit taking direct responsibility for it. Municipalities view the food security function as an unfunded mandate, and so the internal and external resources are limited, despite the critical need on the ground. Expenditure figures for food security interventions in municipalities are also very hard to estimate because the existing budget structure does not currently recognise food security as a municipal function.

Value Chain Analysis of the CASP Grant

The CASP grant provides a case study that highlights some of the intergovernmental coordination challenges affecting effective implementation of food security interventions. The CASP value chain contains six main functions or components.

Figure 23: Value chain of the CASP grant



Source: Author (2014)

Blockages in any of these components will negatively affect the grant's performance:

- Business Plan: If the business plan submitted by provincial department is late or does not comply with the grant framework, it is returned by the assessment committee. As a result, some projects may start late or be dropped completely. To reduce the risk of late or incomplete submission, the transferring department should develop easy-to-complete business plan templates and provide capacity building and ongoing technical support.
- Payment Schedule: If the province's cash-flow and disbursements to service providers are not synchronised, the province could end up paying service providers late and incurring penalties or building up surpluses that could have been invested to earn additional income. To reduce this risk, DAFF must make sure the payment schedule issued to National Treasury is consistent with the service delivery schedules of provincial departments, while provincial departments must ensure proper cash-flow planning and management.

- Payment: If the transfer of funds to the province is delayed, projects cannot proceed because funding is not available. This may result in some projects being incomplete at the end of the financial year. Therefore, provinces should comply with all the necessary requirements for disbursements and, especially, make sure all the relevant signatories sign off on their business plans.
- Implementation: If procurement processes are delayed, or the selected service providers do not meet the minimum requirements, the project could be completed late or not completed. To reduce this risk, provinces should plan properly and ensure procurement staff have the relevant skills and capabilities. In addition, contract-management capacity should be built and disincentives created to avoid voluntary default by contractors.
- Reporting and Evaluation: If provinces do not submit reports accurately and on time to DAFF (where the information is collated and reported to National Treasury every quarter), planning and management decision-making will be adversely affected. For instance, issues may emerge late in the financial year, when corrective action could have been taken much earlier to resolve any blockages. To reduce the reporting burden on provinces, sector departments requiring the same information should agree on a standardised reporting format.
- Updating Grant Framework: Every year the DAFF reviews and submits the proposed grant framework to National Treasury. All provincial departments must adhere to the framework conditions when accessing funding from the CASP grant. If the grant conditions are unnecessarily complex, administering the grant could be cumbersome for provinces and may result in a lower uptake of the grant. As part of the annual update process, provinces should be given the opportunity to provide inputs into the grant framework, something which is currently not happening.

6.4 The Impact of Food Security Programmes

The survey of households showed that, of all the social grants, the old age grant is the most effective in reducing food insecurity. This may be because the old age grant has very good coverage and is more than four times higher than the child support grant. The survey also found that, despite controlling for income, better educated households experience lower food insecurity. This finding suggests that not only incomes but also better education could be improving household food security through more subtle ways (such as improved coping strategies). Results also show that households in urban areas are less likely to experience food insecurity than those in rural areas.

Various government expenditure programmes on food security were evaluated to assess their impact on food security:(i) the National School Nutrition Programme (NSNP); (ii) the Expanded Public Works Programme (EPWP); (iii) the Community Works Programme (CWP); (iv) the social grants programme; (v) the National Nutrition Programme (NNP) and (vi) the Consolidated Agricultural Programme (CAP).

Since 2005, both the EPWP and CWP have helped to reduce household food insecurity, by increasing households' ability to purchase more food. Both programmes have been effective in improving food consumption across all household income groups, as well as improving food security through increased labour supply and the resulting increase in household market incomes. The NSNP and NNP also contribute positively to household food security, by improving household food consumption. These programmes increase household disposable incomes, as households benefit from feeding and nutrition programmes and spend less on food. The reductions in food expenditure and increased household purchasing power contribute to improving household food consumption i.e. food security. In this regard, the NSNP and NNP programmes operate in much the same way as the social grant programme, which increases household disposable incomes. Social grants were found to have a marginal effect on reducing food insecurity but are still important, especially for the low and middle income groups. Lastly, the impact of the CAP showed mixed results, increasing only marginally increased food consumption for the low and middle income groups but failing to achieve wider increases in economy-wide food supply.

When the efficiency of the programmes were assessed, the CAP was found to have performed best in terms of technical efficiency over the period followed by the NSNP, EPWP and social grants. However, the results showed that, although overall the CAP had been more efficient than the other programmes, its performance had deteriorated from 2009/10 to 2012/13. Social grants were the least efficient but showed a relatively stable performance.

6.5 Conclusion

The access to sufficient food is an important socio-economic right under the Constitution, but assessing whether government is meeting this statutory obligation is very difficult because the food security function is fragmented across different spheres and sectors. As a result, setting norms and standards that can be costed is a challenge. The recently approved National Policy on Food Security and associated strategies do encourage the strengthening of small-scale agriculture, but the policy is not adequately resourced because DAFF has not submitted a detailed, properly costed implementation plan and addressed existing implementation challenges. An assessment of provincial conditional grants suggests that the inability to absorb existing funds, especially the CASP grant, is symptomatic of institutional weaknesses and blockages in the conditional grants value chain. Blockages identified are poor planning, lack of staff support, inadequate marketing, delays in procurement, weak monitoring and evaluation, lack of farmer training and poor leveraging of other stakeholders.

Furthermore, CASP and Illima/Letsema grants essentially have the same objectives yet are implemented separately, while the Illima/Letsema grant overlaps with the DRDLR's recapitalisation and development programme, which creates competition and reduces the impact on the ground. A further challenge is that the DAFF is unable to ascertain the true service delivery performance of provincial agriculture departments, largely because of the lack of a comprehensive evaluation of provincial service delivery. Holding provinces accountable is difficult, as no norms and standards are in place to measure provincial performance. Municipalities currently have no clear legislative mandate, resulting in a lack of accountability and responsibility for food security. The food security function is considered an unfunded mandate, which means municipalities are restricted in applying for additional resources despite the critical need on the ground.

The most promising programmes for improving household food security were found to be those that improve a household's ability to access food to meet their dietary demand and at a lower cost. Improving household income increases their purchasing power. In addition, increasing food availability at lower cost could improve households' food accessibility and thereby reduce food insecurity. However, since households largely acquire food through purchase, improving their income can also be effective in reducing food insecurity. In this regard, both the EPWP and CWP increase household income. Creating more jobs and improving skills to supply the labour market and contribute towards industries' growth are vital for improving household welfare and income generation.

Of the supply-side programmes, the CAP is fundamental for food security, as improving food production and agricultural productivity contributes to minimising the cost of producing food. However, the impact assessment of the programme found that both food prices and household food expenditure have increased, while the CAP does not contribute to improved household purchasing power. The increases in food prices and the absence of improved household income show that the CAP has failed to address the country's household food insecurity. To achieve the programme's goal, what is needed urgently is effective land reform (the land reform policy is among various programmes that support the CAP) and improved infrastructure to increase market accessibility. Climate change has had negative impacts on the country's food production during recent periods, and so addressing the impact of climate change might reduce the sector's vulnerability and thereby improve household food availability at a lower cost.

The impact assessment shows that the social grants programme is unlikely to protect households against price shocks, since grants generally increase at below food inflation levels. However, the policy has contributed to reducing food insecurity, mainly in low-income households. Further, an important development goal for the South African government is providing healthy food and improving household diets. The NSNP and the NNP have contributed towards a reduction in total household consumption and increased food expenditure. Improving the ability of households to acquire and access food could increase the effectiveness of the various nutritional programmes in reducing food insecurity.

6.6 Recommendations

With respect to improving public expenditure impacts on food security, the Commission recommends that:

1. Department of Agriculture, Food and Forestry (DAFF) strengthens its ability to enforce the conditions in the grant framework to ensure better oversight of provinces, so that spending and performance of the agricultural conditional grants can be improved. The Commission suggests that norms and standards be developed to assess the performance of provinces and five-year evaluations of conditional grants be institutionalised.
2. Special focus is put on improving the operations of different food security programmes, especially Agriculture, EPWP and the School Nutrition Programme, which accelerate reduction in household food security without necessarily increasing programme expenditure. Areas that can yield improved results include better joint planning (such as creating a value chain between smallholders receiving grant support and the NSNP) and streamlining procurement processes with the assistance of the Chief Procurement Office. The ability to use available resources optimally for the food security programmes have declined overtime.
3. Government clarifies the legislative mandate and responsibility of municipalities in relation to food security. In this regard, DAFF should develop a policy on urban food security with concrete proposals on how such a mandate will be funded. Currently, food security is not seen as a competence of municipalities and therefore cannot be funded.
4. The terms of reference for the committee to review the agricultural conditional grants are finalised without unnecessary delays. The review should be comprehensive in scope and should include assessing the value chain of conditional grants and unlocking operational constraints, especially in relation to planning, procurement, comprehensive smallholder support, cash-flow and monitoring and evaluation. Stakeholders such as the Department of Rural Development and Land Reform (DRDLR) should be invited to be part of the committee, and ways to streamline the funding overlap between the Illima/Letsema grant and the recapitalisation and development programme should be examined.

PART 3

Investment in Infrastructure

Investments in infrastructure, such as transport, energy, telecommunications and housing, are essential inputs for economic growth. They complement many other forms of investment but also tend to be large-scale and long-term, requiring high levels of coordination to maximise the wider benefits. Therefore, government will inevitably play a vital role in planning, delivering and (to some extent) financing such projects. Government will show its commitment to addressing a legacy of historical under-investment, by improving South Africa's infrastructure – investing more in infrastructure as a share of GDP over this decade than previously – and setting out a clear vision for the future.

The focus is on municipal infrastructure, transport, energy and housing, sectors where the problems are relatively well-understood and where the potential damage to growth is likely to be more severe. Transport needs to adapt to a growing population and changing needs in different parts of the country. Under-investment and inadequate maintenance characterise the provision of roads, railways and airports. Particular inefficiencies continue in how transport is priced and how decisions are made and financed. In common with other countries, South Africa also faces significant challenges in trying to achieve a balance of security, stability and affordability in energy supply, while at the same time addressing backlogs. The electricity tariff reforms are geared towards providing a framework for investment. But building confidence will take time, after constant internal bickering in government that resulted in revisions to the framework every few years. The current policy framework assumes big increases in future electricity prices, which will affect the sustainability of municipal finances. Prices have also risen in the housing sector because of the under-supply of housing, especially in high-growth areas of the country. The country has been unable to build enough houses to keep up with the growing demand and poor housing quality and location have been cause for concern. Government needs to take responsibility for ensuring the affordability of the long-term strategy and delivery of housing throughout the country.

Chapter 7 is on improving the financing of municipal capital investments. The Constitution emphasises local government's developmental role, and municipal capital investments play a pivotal role in supporting local economic growth and social development. The Commission hearings on the Local Government Fiscal Framework (LGFF) confirmed a vertical (and likely horizontal) capital funding gap. The current infrastructure grants are not sufficient to cover capital expenditure needs, given existing funding sources and limited own revenue funding sources. The chapter identifies the factors affecting own revenue contributions to municipal capital financing and quantifies the magnitude of these contributions. It also reviews the local government grant framework to assess its adequacy, performance and targeting of infrastructure-related conditional grants, and makes recommendations on additional funding streams to support municipal capital expenditures.

Chapter 8 is on improving public transport for better mobility. There is a critical gap between the requirements of national transport policy, which promotes an efficient and effective public transport system, and the current public transport subsidy framework and implementation. The chapter reviews the current public transport subsidy system, with the aim of designing and recommending appropriate public transport subsidy frameworks that will align the actual transport operations with transport policy provisions.

Chapter 9 is on administered prices and their impact on municipalities. The administered price studied is electricity tariffs. Municipalities are constitutionally mandated to deliver basic services, including distribution of electricity. They purchase bulk electricity from Eskom, the government utility that has a monopoly with respect to generation and transmission of electricity. After a government bailout in 2008/09, Eskom embarked on a campaign to ensure more cost-reflective tariffs, effectively pushing up the price of bulk electricity. Studies on the impact of these electricity price increases have tended to focus on poor households or the economy as a whole, but not on municipalities – despite the pivotal role that municipalities play in facilitating social and economic development. The chapter quantifies the impact of electricity price increases on municipal expenditure and revenues between 2003/04 and 2012/13 and evaluates the effect of electricity price increases on municipal expenditure and revenue.

Chapter 10 is on reforming housing policies for better human settlements. Understanding housing demand will enable government, especially metropolitan municipalities, to plan adequately and provide for future housing needs. The chapter evaluates housing demand (through the housing ladder) and self-build initiatives. Based on the housing replacement value, households are divided into categories in order to identify those that should be encouraged to self-build and those that will require government-subsidised housing.

CHAPTER 7

Improving the Financing of Municipal Capital Investments

Improving the Financing of Municipal Capital Investments

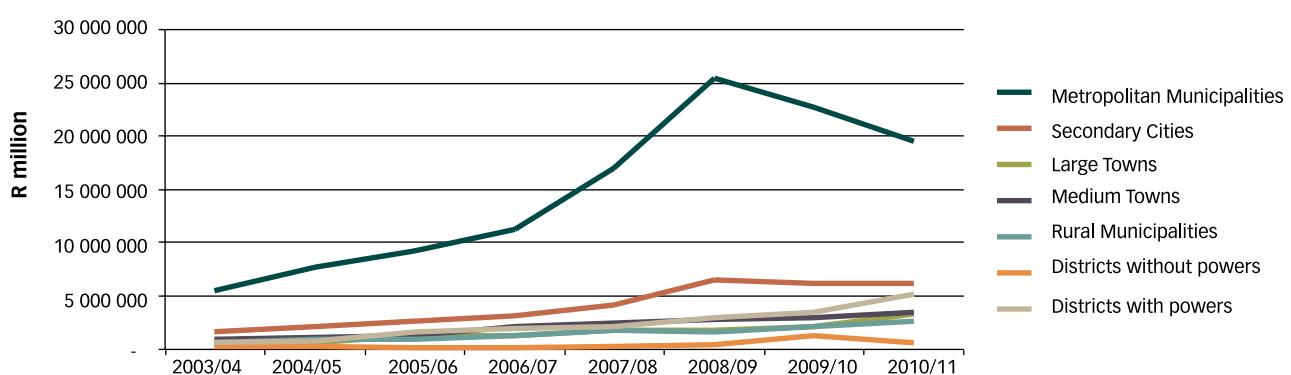
7.1 Introduction

Public investment in both economic and social infrastructure is one of the key pillars of the National Development Plan (NDP) and critical for long-term social and economic development. In this regard, local government plays an important role in rolling out infrastructure to local communities. Such investments are necessary to remedy historical legacies, eradicate service delivery backlogs, improve access to services and support the growth of local and regional economies. Municipal investments in the local economy manifest in the form of municipal capital expenditures, which are funded through a combination of own revenues, loans from credit markets and intergovernmental transfers (predominantly conditional grants). Following the 2008 global financial crisis, these revenue sources have come under increasing pressure, compromising the delivery of key local infrastructure needed to meet the community demands.

Government needs to ensure that social and economic investments continue to protect the poor and grow the economy. However, constraints in the funding of municipal capital expenditure will limit such socio-economic impacts, while the government's tightening of the national budget also restricts the resources available as national grants. Given the limited revenue sources, either these resources need to be used more efficiently or local government's revenue powers need to be extended to finance capital expenditure.

Local government expenditures consist of both operating and capital expenditures. Operating expenses are the recurrent expenditure required to deliver immediate services to households, while capital expenditures constitute investment in social and economic infrastructure. Capital expenditures take place over long periods of time and do not necessarily result in an immediate benefit to the consumer. Figure 24 shows capital expenditure by municipal type.

Figure 24: Municipal capital expenditures by municipal type (2003/04–2009/10)

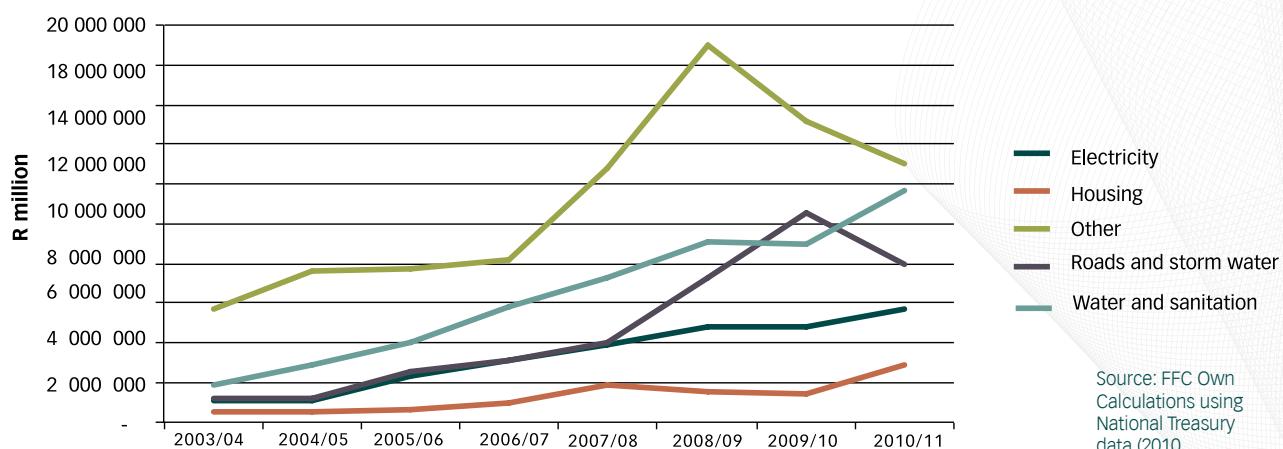


Source: FFC own calculations using National Treasury data (2010)

Municipal capital expenditure has been increasing and in 2010/11 exceeded a total of R40-billion in total for all types of municipalities. Since 2008/09, capital investments have decreased slightly, which was due to the end of the 2010 FIFA World Cup and the impact of the 2008/09 financial crisis.

The nature of municipal capital expenditures reflects the service mandates devolved to local government, as specified in Schedules 4B and 5B of the Constitution. Local government service mandates include important basic services, such as water and sanitation, refuse removal and electricity distribution. Figure 25 shows capital expenditure by service (budget item line).

Figure 25: Municipal capital expenditure per budget line item (2003/04–2010/11)



The ‘other’ line item makes up the bulk of municipal capital investments and includes infrastructure expenditure (e.g. town halls or municipal buildings), which generally do not generate any revenue. The second largest capital expenditure item is water and sanitation infrastructure. Electricity and housing constitute relatively smaller shares of municipal capital expenditure, reflecting inter-governmental arrangements. For example, local government and Eskom share the distribution of electricity, although electricity distribution is constitutionally a municipal mandate. Eskom distributes electricity to around 40% of total electricity consumers in the country (National Treasury, 2008) and so invests significantly in local electricity infrastructure.

The Financial and Fiscal Commission (the Commission) review of the local government fiscal framework in 2011 highlighted the strain on municipal capital financing sources. The Commission found that local government infrastructure grants are insufficient to fund the capital investment needs of communities. Building on this initial work, this chapter examines the constraints in municipal own revenues and borrowing for financing local infrastructure. A description of the capital expenditure performance is followed by a discussion of trends in municipal revenue sources for capital investments. Then, after an analysis of the current constraints in municipal own-revenue sources for capital financing, concluding remarks are made and recommendations presented.

7.2 Institutional and Regulatory Arrangements

The increases in capital expenditure shown in Figure 25 may be encouraging, but are they sufficient to meet the demand for local infrastructure? The municipal budgeting process can give an indication of the capital-investment needs, as municipalities need to consider local needs and community demand for infrastructure when formulating their budgets.

The under-spending of municipal capital budgets is pandemic in South African local government, as Table 26 (page 96) shows.

Table 26: Under-spending on capital budgets by municipal type (2003–2010)

Location	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
Metropolitan Municipalities	31.1%	11.5%	29.2%	14.9%	3.1%	-10.5%	3.2%
Secondary Cities	30.0%	21.8%	33.9%	34.6%	30.7%	27.9%	29.4%
Larger Towns	51.4%	45.3%	21.2%	30.7%	27.7%	34.3%	36.0%
Smaller Towns	43.0%	27.2%	43.9%	35.3%	40.9%	33.6%	30.1%
Rural Municipalities	47.4%	36.9%	51.4%	48.9%	24.1%	32.8%	33.5%
Districts (not water service providers)	36.3%	-4.4%	57.0%	75.8%	41.3%	56.9%	-24.0%
Districts (water providers)	64.3	49%	33.5%	31.8%	52.7%	44.9%	40.3%
Total	38.0%	21.6%	33.4%	27.3	21.3%	13.0%	18.1%

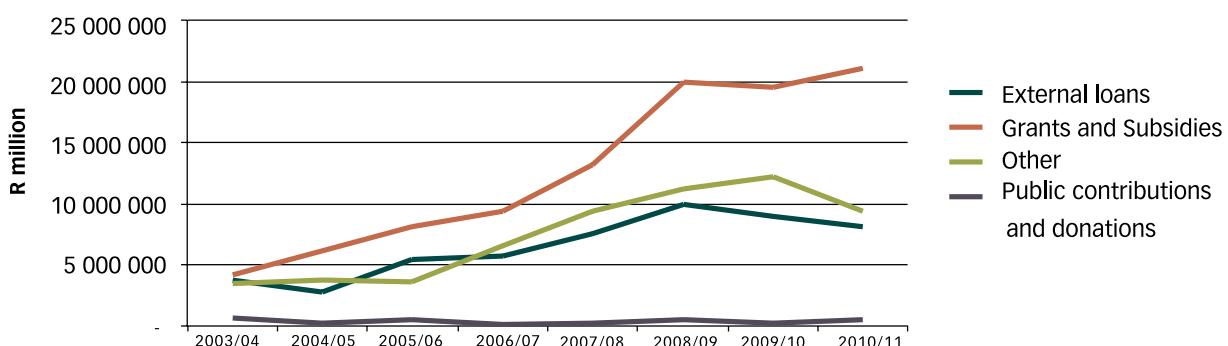
Source: FFC Own Calculations using National Treasury data (2010)

Between 2003/04 and 2009/10, the trend has been for municipalities to under-spend their capital budgets, although metropolitan and district municipalities that are not water service providers managed to decrease their under-expenditures during this period. Under-expenditure of capital budgets was 18.1% in total in 2009/10. The 2012 State of Local Government Finances and Financial Management Report (National Treasury, 2012b) attributes such poor capital spending to poor capital budgeting practices by municipalities, a shortage of planners and engineers to facilitate project bids, poorly managed procurement processes, poor management of adjustment budgets and political interference.

The under-spending of municipal capital budgets adds an additional – but separate – dimension to assessing the funding needs for municipal capital expenditures. These needs should be solely determined on the demand for local capital investment and the funding mix available. Although under-spending exacerbates the problem, it should not be considered when assessing the funding needs required for capital expenditures.

7.3 Municipal Revenue Sources for Capital Expenditures

Municipalities currently rely on four broad sources for financing capital expenditures: intergovernmental transfers, own revenue contributions, external loans and public contributions and donations. The trends in these revenue sources are depicted in Figure 26.

Figure 26: Sources of funding for capital expenditures (2003–2011)

Source: Author's Own Calculations using National Treasury data (2010)

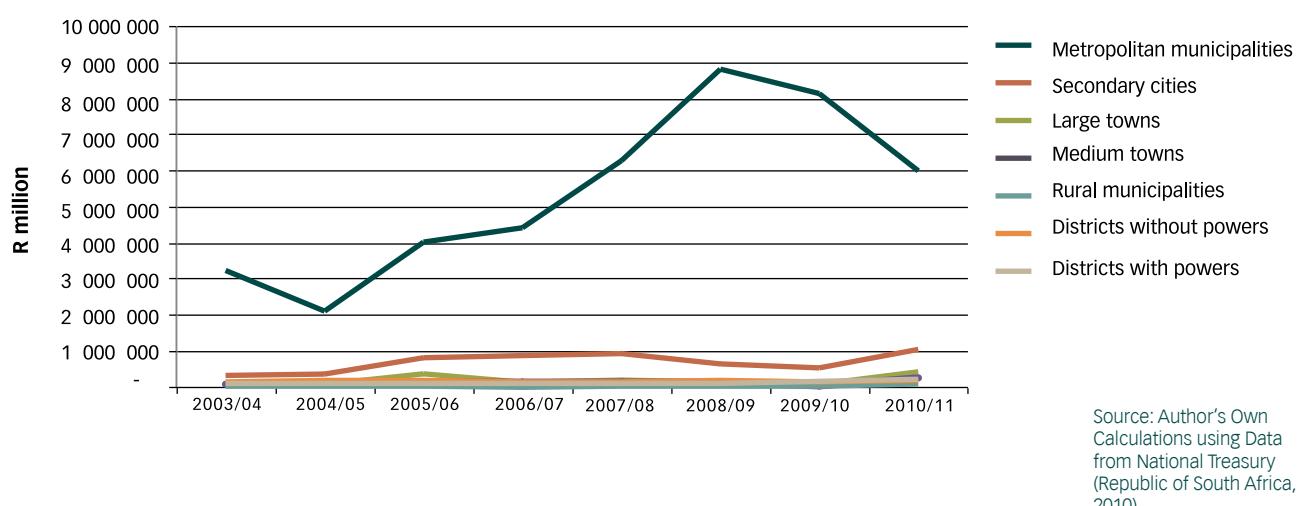
In general, grants and subsidies from national and provincial government constitute the bulk of capital revenues. Municipal own revenue ('other'), which largely comes from local taxes and tariffs for services such as electricity, water, sanitation and solid waste removal, is the second largest contributor to capital financing, followed by municipal borrowing. These two revenue sources are likely to be sensitive to general economic conditions, as indicated by downward movements in these revenues after the 2008/09 financial crisis. Municipal borrowing ('external loans') also seems to be more sensitive to the general economic climate than own revenues. Public contributions and donations have been growing at relatively constant rates.

7.3.1 Trends in Local Government Borrowing

As shown in Figure 26, local governments can borrow money for capital investments. Credit instruments play a valuable role in infrastructure financing, particularly if invested in infrastructure that generates revenue. In such cases, the asset itself will pay off the initial funds borrowed, as per the tariff arrangement. Municipal access to credit is thus an important revenue source for municipal capital investments.

Figure 27 illustrates the borrowing trends for different types of municipalities from 2003/04 to 2010/11. Metropolitan municipalities dominate the municipal borrowing market, suggesting that the potential to borrow is confined to the metros and secondary cities. This is because they are able to finance these loans and to provide higher levels of collateral. Smaller and poorer municipalities are relatively limited in their ability to borrow.

Figure 27: Borrowing trends across municipal types (2003/04–2009/10)



The general economic climate also affects the ability to borrow, as the municipality's credit rating and general ability to finance loans influences the decision to borrow. During economic downturns, borrowing abilities (or appetite for borrowing) decline because of limited revenue generation and consequent credit rating downgrades.

Table 27 (page 98) shows the borrowing liability, costs and sustainability measures for metropolitan municipalities. A crucial borrowing sustainability measure is the cost of servicing the debt as a percentage of own revenue (the debt-service-cost to own-revenue ratio).

Table 27: Measures of metropolitan municipalities borrowing (2011/12)

R'000	Johannesburg	Cape Town	eThekwini	Ekurhuleni	Tshwane	Nelson Mandela Bay
Total Borrowing Liability	11 456 835	6 679 271	11 270 509	4 333 358	6 487 030	1 729 021
Cost of borrowing for the current financial year	1 844 483	966 040	1 819 044	663 579	1 217 198	312 128
Total cost of debt as % of own revenue	7.5%	4.8%	9.4%	7.8%	7.7%	6.2%
Total cost of debt as a % of operating expenditure	6.5%	4.4%	8.6%	6.6%	6.7%	4.8%

The total debt-service-cost to own-revenue ratio for metropolitan municipalities is just below the acceptable 15%³⁰ level i.e. currently at 14.7%. Individual metropolitan municipalities have debt-service-cost to own-revenue ratio of between 4.4% and 9.4%, which is within the internationally acceptable level. The City of Cape Town has the lowest debt service cost to own-revenue ratio (4.4%), which is probably due to the municipality's positive credit rating (Aa2.za) from Moody's rating agency. (Other municipalities, such as the City of Tshwane and Nelson Mandela Bay, have received improved grades of Aa3, one notch lower than the Cape Town municipality's credit rating but still indicating a stable financial outlook.) National Treasury (2012) derived four basic pre-requisites for a well-functioning municipal credit market, as illustrated in Figure 28.

Figure 28: Characteristics of an effective and efficient municipal credit market

Well-functioning municipal credit market			
Effective regulation	Responsible and efficient lenders	Credit-worthy borrowers	Appropriate government intervention

Source: National Treasury (2012a)

These characteristics are explained below:

- **Effective regulation** is regulation that does not hinder sub-national borrowing, as it is not complex and does not discourage well-calculated, high-risk borrowing (Liebig et al., 2008).
- **Responsible and efficient lending** aims to protect depositors and lenders against reckless lending and excessive risk taking, sets prudential limits and guidelines on credit extensions, and aims to curb systematic risks associated with sector shocks that negatively affect the economy.
- **Creditworthy borrowers** are determined by their credit risk, which depends on a number of financial performance measures and non-financial indicators, such as the level of political interference. (Moody's, 2005).
- **Appropriate government intervention** is defined as attempts by governments to address market failures, usually through the introduction of municipal credit markets enhancers such as the Colombian FINDETER³¹.

7.3.2 Municipal Infrastructure Grants and Current Review Process

As mentioned, intergovernmental fiscal transfers – in the form of conditional grants – play an important role in the financing of municipal capital expenditure. The primary aim of the infrastructure grant system is to remedy service backlogs that are the result of low investment in certain

³⁰ See also Liu and Waibel (2008)

³¹ Majority state-owned institution (86% government ownership) that serves as a guarantee for local governments when borrowing from commercial banks.

areas of the country during Apartheid. In general, municipal own revenues should finance the economic infrastructure required for economic and population growth. Table 28 provides a list of current infrastructure grants in the LGFF since 2005/06.

Table 28: National transfers to local government through conditional grants (2005/06–2015/16)

R million	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	
	Outcome								Revised estimate	Medium-term estimates		
Direct transfers Subtotal	—	7,447	15,127	18,562	18,699	20,871	24,643	28,029	31,132	33,698	37,121	
Municipal infrastructure grant	5,436	5,938	8,754	6,968	8,728	9,704	11,443	13,882	14,352	14,684	15,448	
Urban settlement development grant				3,590	4,418	4,968	6,267	7,392	9,077	10,335	10,700	
Public transport infrastructure and systems grant	242	518	1,174	2,920	2,421	3,700	4,612	4,988	4,669	5,126	5,279	
Integrated national electrification programme grant			462	589	900	1,033	1,097	1,151	1,635	1,565	2,056	
National Electrification programme	297	391										
Neighbourhood development partnership grant	0	—	41	182	508	832	738	578	598	591	600	
2010 FIFA World Cup stadiums development grant	0	600	4,605	4,295	1,661	302	—	—	—	—	—	
Disaster relief	311											
Rural transport grant	0	—	—									
Rural roads asset management systems grant	0	—	—	—	10	10	35	37	52	75	98	
Integrated city development grant	0	—	—	9	—	—	—	—	40	150	150	
Rural households infrastructure grant	0	—	—	—	—	—	—	—	107	113	118	
Municipal drought relief grant	0	—	91	9	54	320	450	—	—	—	—	
Municipal water infrastructure grant	0	—			—	—	—	—	603	1,059	2,672	
Infrastructure transfers subtotal	783	943	1,484	1,928	2,763	2,620	2,476	4,482	5,399	7,029	8,617	
Regional bulk infrastructure grant	—	—	300	450	577	851	1,260	2,523	3,203	4,483	4,872	
Backlogs in the electrification of clinics and schools	—	—	45	90	149	—	—	—	—	—	—	
Backlogs in water and sanitation at clinics and schools	—	—	105	186	350	—	—	—	—	—	—	
Integrated national electrification programme (Eskom) grant	783	893	973	1,148	1,616	1,720	1,165	1,879	2,141	2,488	3,680	
Urban settlement development grant	—				—	—	—	—	—	58	65	
Neighbourhood development partnership grant	—	50	61	54	70	50	50	80	55	—	—	
		—	—	—	62	78	341	—	—	—	—	
Total of Direct and indirect grants	783	8,390	18,678	22,234	23,974	25,699	29,197	35,230	39,994	51,100	57,987	

Source: Adopted from National Treasury, 2013.

Between 2005/06 and 2011/12, total conditional grants have almost quadrupled, increasing from R7-billion to R27-billion. Total allocations to the Municipal Infrastructure Grant (MIG), which is the largest conditional grant, more than doubled during 2005/06–2011/12 and are expected to increase by 11.6% over the 2013/14 Medium Term Expenditure Framework (MTEF) period. Adding to municipal under-expenditure of capital grants was the under-spending of conditional grants (National Treasury, 2012b). Municipalities only spent 76.9% of their direct conditional grants (excluding the Urban Settlements Development Grant).

Since the inception of the local government infrastructure grant system, the principle of simplicity (i.e. a few consolidated infrastructure grants) has been promoted but never fully implemented. Attempts to consolidate the grant system, through the Consolidated Municipal Infrastructure Programme in 1998 and the MIG in 2004, have not worked, with grants proliferating in subsequent years (as Table 28 reflects). In the 2013, the finance minister announced a review of the local government infrastructure grant system, which the Commission is participating in through its Secretariat.

7.4 Public-Private Partnerships (PPPs)

PPPs can be regarded as the public sector partnering with the private sector in an attempt to reduce the fiscal burden on government without compromising service delivery. In PPPs, "both parties contribute funds or services in exchange for certain future rights" (Kitchen, 2006).

In South Africa, the Municipal Finance Management Act (MFMA) defines PPPs as commercial transactions between a municipality and a private party. A PPP is a vehicle by which the private party (1) performs a municipal function for or on behalf of the municipality (2) assumes substantial financial, technical and operational risks in connection with the performance of the function and/or use or management of municipal property, and (3) receives a benefit from performing the municipal function. This benefit may be through compensation from the revenue fund, or charges and fees collected from the users/consumers or a combination of such compensation, charges or fees. The MFMA regulates and stipulates the conditions and processes for municipalities entering into PPP agreements, while the municipal PPP regulations clearly elaborate on these provisions. Table 29 briefly discusses the different PPP structures for capital projects or services.

Effective and efficient PPP agreements are based on a mutual understanding of the risks and costs that are borne by both parties; the relationship is contractual and can be once-off or ongoing (Kitchen, 2006). A successful example of a PPP is the Colombian Bogota TransMilenio bus system concession contract, which was implemented in an attempt to reduce traffic congestion and was funded by the Colombian government, the World Bank and respective transport sector stakeholders (Alam, 2010).

In order to streamline and encourage the use of PPPs in South Africa, a PPP unit was established within the National Treasury. However, the use of PPPs in South African local government has been limited. This is evident by the very limited data available and collected by the PPP unit on existing PPP arrangements. The use of PPPs remains a potentially untapped financing option for municipal capital investments.

Table 29: Basic forms of PPP agreements

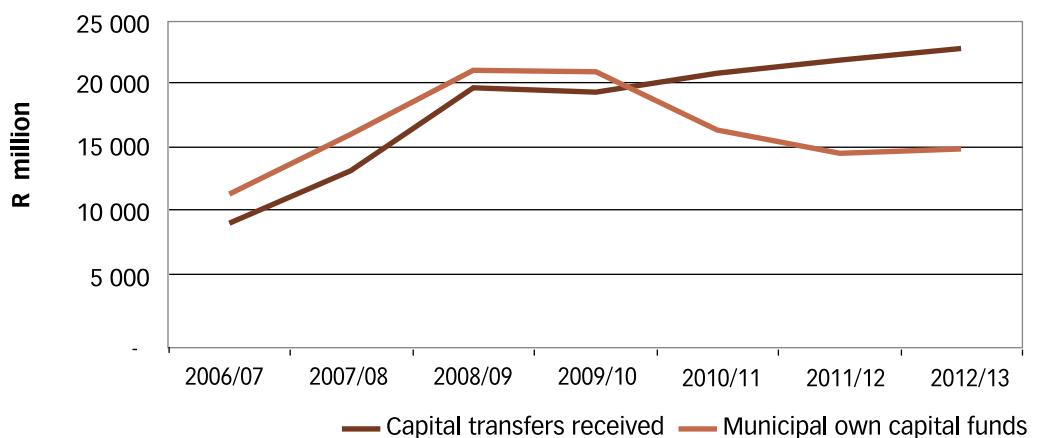
Contract type	Description
Service contract	In a service contract the government pays the private partner a predetermined fee for one or more specified services as contracted, while government remains the primary provider of the infrastructure service and only contracts out only portions of the operations. Such contracts are not necessarily for financing expenditures (e.g. CAPEX) but improve on efficiency levels which in essence releases finances
Management contracts	In a management contract, daily management control and authority is assigned to the private partner at a predetermined rate or even for a share in profits while government (public sector) holds the ultimate responsibility for provision of the contracted service such as primary health care. Typically, a management contract will upgrade financial and management systems and decisions concerning service levels and priorities while their public sector counterpart will retain the obligation to major capital investment projects that are related to expanding or substantially improving the system.
Affermage or Lease Contracts	Under lease/affermage contracts the private partner is responsible for the service in its entirety and also undertakes the obligations relating to quality and service standards. Thus the responsibility of service provision is transferred from the public to the private sector operator and the financial risk for operation and maintenance is borne by the private sector partner. New and replacement investments remain the responsibility of the public sector partner. Therefore the public sector partner is responsible for the initial financing of the system which is then contracted to the private sector partner who in turn transfers part of the tariffs charged to the public sector partner to service raised loans raised to finance extensions of the system. Lease payments are made in the case of lease contracts while an agreed affermage fee is paid to the contracting authority following collection of revenue from consumers by the private partner.
Concessions	Concessions makes private sector partners responsible for the full delivery of the services in a specified area, including operation, maintenance, collection of tariffs, management, construction and rehabilitation of the system i.e. all capital investment relating to the service. Although the private sector partner is responsible for the asset, the asset is publicly owned even during the concession period. The public sectors' role becomes regulation of the price and quality of the service. Government may also provide financing support to assist with capital expenditures, sometimes in return for a commensurate part of the collected tariffs. Concessions are long-term contracts, typically valid for 25 – 30 years so as to allow the private sector partner sufficient time to recover the capital investment while also earning appropriate return from the investment.
Build-Operate-Transfer (BOT) and Similar Arrangements	BOTs and similar arrangements such as Design-Bid-Build, Design-Build or Build-Own-Operate; are specialized concessions in which a private sector or consortium finances and develops a new infrastructure project or a major component according to the performance standards set by government. Under BOTS the private partner owns the assets for the period specified in the concession contract but other arrangements such as Design-Build-Operate (DBOs) ownership is never in private hands. The public sector in such agreements usually agrees to purchase a minimum level of output produced by the facility that is sufficient enough to allow the operator/private sector partner to recover its costs during the operation.
Hybrid Arrangements	These arrangements bring together different characteristics of varying contract types in an attempt to bring together attributes suitable to particular projects' requirements and the operating conditions. They provide tailored solutions in terms of scope and risk sharing arrangements between contracted partners.

Adapted from PPP Handbook Produced by the Asian Development Bank (2008)

7.5 Current Constraints in Municipal Own Revenues for Capital Financing

Figure 29 illustrates the contributions of municipal own revenue sources and government transfers to municipal capital expenditures from 2006/07 to 2012/13. From 2006/07, the contribution of municipal own funds steadily increased, reaching a peak of R22-billion in 2008/09, but then declined to below the level of capital transfers received from government. This is due to the recession's effect on municipal own revenue generation and borrowing capabilities. Other contributing factors are (i) exhausted municipal historical cash reserves (ii) cost pressures affecting operating budget surpluses adversely and (iii) municipalities substituting own revenue sources for national transfers in financing capital expenditures (National Treasury, 2010).

Figure 29: Financing of capital expenditures by own funds and transfers (2006/07–2012/13)



Source: National Treasury (2010)

Clearly intergovernmental fiscal transfers are progressively playing a greater role in the financing of local government infrastructure. This raises issues around the sustainability of local government own revenues for financing local infrastructure needs, as well as whether national government is able to finance the bulk of such expenditures. In 2009/10, the Commission found that the infrastructure grants currently paid to local government are insufficient to supplement municipal own revenues needed to fund local government infrastructure needs, i.e. there is a vertical fiscal imbalance³² on municipal capital budgets (FFC, 2013). Given the downward trend of municipal own revenue contributions to capital investments, this vertical fiscal gap is likely to widen progressively, putting more pressure on national government to fund municipal capital expenditure through infrastructure grants.

The funding sources for municipal capital expenditures appear to be under pressure, which could compromise the delivery of local infrastructure necessary to promote local economic and social development. Commission research confirms that such these funding sources are sensitive to local economic circumstances. Therefore, the recent economic downturn has put increased pressure on local government own revenue sources in funding local infrastructure needs. Exacerbating the situation is local government's poor capital-expenditure performance. Government needs to develop mechanisms to improve the performance and outcomes of municipal expenditures and to look at assigning additional revenue sources to local government. The next section provides some alternative municipal capital financing instruments.

³²This refers to the difference between own tax revenue and own expenditure of municipalities. The vertical fiscal gap is the extent to which municipal expenditures exceed their own-source tax revenues

7.6 Alternative Municipal Capital Financing Instruments

A number of developed and developing countries have explored alternative municipal capital financing instruments, in addition to the traditional financing approaches discussed above.

Informal Taxation Schemes (Indonesia and Kenya)

Known as 'gotong royong' in Indonesia and 'harambee' in Kenya, these schemes vary significantly from country to country. Basically they are contributions that local residents make towards the construction and maintenance of local public goods, such as roads, water systems. The contributions can be in money and/or labour. Any payments fall outside the formal tax system but are coordinated by public officials. The enforcement of these informal taxes is largely through social customs and norms and involves often complex arrangements to determine how much each household should pay and the penalties for those who don't contribute (Alm, 2010).

Development Banks and Financial Institutions (India)

Development banks and financial institutions are primarily established to offer long-term credit and other financing services for infrastructure projects, even with the existence of municipal borrowing constraining factors (Alam, 2010). An example is the Infrastructure Development Finance Company in India, which was created in 1997 by the Indian government and (foreign and domestic) financial institutions, with the purpose of attracting private capital for financing Indian infrastructure projects. It currently offers a wide range of financing and advisory services for infrastructure projects, such as debt financing, project loans, take-out financing, guarantees for payment obligations and project performance, and advisory and capacity-building services to both government and non-government organisations (NGOs).

Municipal Pooled Financing (India)

Municipalities and projects are pooled for the purpose of accessing market finance, while minimising costs and risks involved, and thus attracting favourable capital financing terms from the market (Alam, 2010). This type of financing is most applicable to municipalities that need to fund small projects but are not able individually to source capital financing from the market for various reasons (e.g. poor credit ratings). An example of a successful pooled fund is the Karnataka Water and Sanitation fund, which was spearheaded by India's Karnataka Urban Infrastructure Development and Finance Corporation.

Development Charges (Canada)

Imposed by the municipality on developers as a condition for approving land development, these charges are used to finance infrastructure projects such as local roads, street lightings and sewers (Kitchen, 2006). In Canada, in an attempt to reduce administrative complexities, municipalities charge the same rate for all properties regardless of differentiating factors such as the location of property. This approach can lead to inefficiencies and so proper capital provision pricing should be carried out when new development area(s) are identified, to ensure that approximations are close to the true costs of capital projects (Kitchen, 2006).

Municipal Bond Market (United States)

Developed in the late 1820s and today one of the largest municipal bond markets in the world (Platz, 2009), the US municipal bond market is self-regulating. Participants develop rules that govern the market, through assigning rights and responsibilities to participants and providing credible information to investors and the public. Certain bond issuances qualify for tax exemptions, at the discretion of the US Internal Revenue Service (Blaauw and Mantso, 2009).

Full-Privatisation of a Function (Brazil)

The complete privatisation of a function is an attempt to encourage competitive market forces, to lower capital service provision costs and improve service quality (Alm, 2010). An example of successful privatisation is the solid and waste disposal and collection in Brazil. Competitive market forces are key to the successful privatisation of a function, which implies government has an active role to play in ensuring non-restrictive entry and exit conditions into privatised markets (Alm, 2010).

7.7 Conclusion

Municipal capital expenditure is crucial for local economic and social development and a key component of the NDP's vision of long-term economic growth through greater state investment in infrastructure. By failing to plan and spend their capital budgets properly, municipalities are compromising the delivery of key social and economic infrastructure. In addition, municipal revenue sources for capital expenditure are under stress, mainly because of the current poor economic climate. All municipalities have a limited ability to generate surpluses from user charges that can be reinvested in capital expenditure. Urban municipalities have some scope to improve their borrowing potential and, given the strain on traditional revenue resources, the possibility exists to explore extending resources and using more non-traditional revenue sources (such as PPPs). However, the financing sources available to smaller and rural municipalities are very limited, and an alternate arrangement is needed for infrastructure delivery in these areas.

7.8 Recommendations

With respect to improving the financing of municipal capital investments, the Commission recommends that:

1. The monitoring and evaluation of municipal capital planning and investment spending are improved. National and provincial treasuries should improve this assessment during municipal benchmarking exercises by:
 - a. Ensuring that capital budgets are realistic and financed, based on capacity to deliver and revenue assumptions.
 - b. Placing a greater emphasis on refurbishing and renewing existing infrastructure stock, as determined by the municipality's asset register
 - c. Ensuring that tariffs are appropriately designed, so that the depreciations costs of existing infrastructure and the funding of new infrastructure are recovered from the tariff. The design of such tariffs should explicitly consider the customer affordability and protection of the poor.
2. Municipalities use alternative and innovative methods to fund and deliver infrastructure, if capacity to plan and spend remains a concern. These municipalities should explore:
 - a. Increasing interaction and partnerships with other organs of state (such as Eskom and Water Boards).
 - b. Greater use of private-public partnerships (PPPs), including fully or partially outsourcing municipal services accompanied by effective contract management and appropriate risk transfer.
3. The PPP unit within the National Treasury improves its monitoring and evaluation of municipal PPPs. This should include:
 - a. Maintaining a dataset of existing municipal PPPs.
 - b. Evaluating the success/failures of existing PPPs and disseminating good practices and awareness of risks.
 - c. Quantifying the uptake of PPP agreements and assessing the current bottlenecks that discourage the use of PPPs.
4. Government explores a new funding and infrastructure delivery model for poorly resourced rural municipalities. It is clear that the capacity to service infrastructure needs in these areas is extremely inadequate. There is potentially a greater role for State-owned companies and other state agents to deliver infrastructure on behalf of these municipalities.

CHAPTER 8

Improving Public Transport for Better Mobility

Improving Public Transport for Better Mobility

8.1 Introduction

Household travel surveys consistently show that large proportions of households have no access to any form of public transport or are dissatisfied with the quality of the available public transport (Gauteng Department of Roads and Transport, 2002; DoT, 2003a; Ekurhuleni, 2013). South Africa's transport system problems are best characterised, and should be acknowledged, as service delivery backlogs. Experiences elsewhere show that addressing such backlogs requires focused interventions, appropriate consolidation of functions and the elimination of half-hearted implementation approaches. The integration of fares, marketing, service scheduling and funding is effective in consolidating transport functions (Meyer et al., 2005). Much of the success of public transport services in Germany, for example, is ascribed to using a 'verkehrsverbund', which is a coordinating institutional structure (Stone, 2011). A survey of transport functions in the United States found that entities that use integrated network planning tend to have improved public transport services (Rivasplata, Iseki and Smith, 2012). However, financial, technological, political and administrative hurdles have first to be overcome, while the entity managing the integration needs to be autonomous in order to define network standards (Meyer et al., 2005). Having uniform standards for the public transport network is especially beneficial to users, allowing them to travel seamlessly across space (Dodson et al., 2011).

Organisational reforms, through assigning selected transport functions to municipalities, can help address transport service delivery backlogs and create an environment for accelerated transport service delivery. A public transport network needs to be designed and managed as an integrated network, not as isolated modes of transport, which is currently the case in South Africa (Walters, 2011). Having such an integrated network also makes it easier to align the transport subsidy (where appropriate) to network objectives. However, in South Africa the public transport subsidy, which amounts to over R17-billion per annum, is allocated independently from the municipal integrated transport plans. This total transport subsidy amount is equivalent to about R30 per month for every person living in South Africa, or R690 per subsidy beneficiary per month – or about 1380 km of 'free' travel per month for the beneficiaries.

The way in which public transport subsidies are allocated also needs reform in order to support a sustainable public transport system. Although the White Paper on National Transport Policy (DoT, 1996) provided for the rationalisation of public transport subsidies, very little has changed since then. The current subsidy framework is not aligned with transport policy. Expenditure on public transport subsidies continues to increase without any proportionate benefits to the public. However, subsidies are currently limited to specific modes (rail and bus), which have very limited network coverage compared to minibus taxis. While the minibus taxi industry is making a case for extending transport subsidies to cover the taxis, the government has yet to make a clear response. The current subsidy framework is also becoming more fragmented, as new modes of public transport such as Gautrain and Bus Rapid Transit are added to the network, each with their own subsidy requirements.

The national transport policy and previous research by the Financial and Fiscal Commission (the Commission) support the assignment of transport functions to the "lowest appropriate level of government" (DoT, 1996; FFC, 2013). This chapter evaluates the South African public transport system with the aim of recommending an appropriate transport framework that will align the transport operations and subsidies with the policy provisions. After discussing the methodology used, an evaluation of the public transport system is presented, followed by a proposal to address the shortcomings. Concluding remarks are then followed by some recommendations for improving public transport.

8.2 Methodology

Both primary and secondary research methods were used. The primary research included stakeholder interviews, research workshops and various forms of quantitative scenario modelling, while the secondary research entailed interrogating published research and synthesising various existing datasets. The investigation was based on the idea that performance should be measured according to the extent to which transport can reduce costs (i.e. monetary, time, and environment) to society and support inclusive growth in line with the National Development Plan (NDP).

8.3 Evaluation of South Africa's Transport Function

The performance of the transport function is assessed using a sustainable transport measurement framework proposed by Litman (2013), which is adapted for local conditions for land transport. The framework evaluates the transport function by comparing the current state of public transport in South Africa with the framework's economic, social, environmental and governance goals and objectives.

8.3.1 Economic

The economic goals of a sustainable transport system are:

- economic productivity, through system efficiency and integration, maximum accessibility, and efficient pricing and incentives;
- economic and business development;
- energy efficiency, to minimise energy costs, in particular fuel imports;
- affordability, to enable all residents to access basic services and activities;
- efficient transport operations and asset management, to maximise cost efficiency.

South Africa's transport system has some way to go in order to meet the economic goals of a sustainable transport system. The system is suboptimal, consisting of isolated transport modes rather than an integrated system (Walters, 2011). The lack of a coherent strategy for managing congestion both on roads and in public transport means that the transport system tends to experience sharp directional peaks, resulting in congestion in urban areas. Travel times are long, with 18% of work trips taking over an hour and a third of education trips taking more than 30 minutes (DoT, 2003a).

Public transport is used mostly by lower-income households, which tend to spend a larger proportion of their disposable income on transport than do higher-income households, despite the transport policy stating that no more than 10% of disposable income should be spent on transport. Higher-income households tend to use cars even for basic trip purposes, such as going to the nearest convenience store.

Travel remains energy intensive in terms of kilometres travelled per trip (based on various transport modes), although fuel consumption per registered vehicle has been declining over the recent past (Mokonyama and Mubiwa, *in press*). Most of the entities, including municipalities, do not have proper asset management systems, which makes budgeting and prioritising infrastructure development and maintenance difficult (Wall, Milford and Kubuzie, 2007). However, the Department of Transport and the Department of Trade and Industry have recently developed guidelines on the procurement of rolling stock infrastructure to support local industries.

As South Africa does not have comprehensive transport policy targets, reporting on service delivery progress is difficult. Service delivery progress tends to be measured in terms of the amount of money government spends relative to budgets, instead of the systematic impact of the expenditure. Therefore indicators such as customer satisfaction in response to service quality, as well as unit costs of transport are generally unavailable. Although the transport policy provides for the user-pays principle (DoT, 1996), no coherent strategy on transport user charges or levies exists.

8.3.2 Social

The social goals of a sustainable transport system are:

- equity and fairness, through a transport system that accommodates all users including those with disabilities and low incomes;
- safety, security and health, which mean minimising the risk of crashes and assaults and supporting physical fitness;
- community development, to help create inclusive and attractive communities and support community cohesion;
- cultural heritage preservation, through respecting and protecting cultural heritage and supporting cultural activities.

South Africa's transport system is still suffering from the spatial distortions and inequalities caused by the apartheid planning framework, which resulted in a transport system characterised by relatively long travel distances, especially for low-income households (NPC, 2011). Town planning schemes are used as administrative tools to guide land-use development, rather than to address the historical distortions that reflect in the transport system, including equity and community development. Furthermore, road reserves continue to be generally designed to accommodate vehicle travel as opposed to the movement of people (Mokonyama, 2010).

The current system disadvantages low-income commuters who generally walk and cycle over long distances because they cannot afford alternative modes of travel, whereas higher income people usually walk for leisure purposes (Maphakela et. al, 2013). Most trips in South Africa take the form of walking (DoT, 2003a), but the infrastructure to support walking is mostly unavailable or grossly inadequate (Maphakela et al., 2013). South Africa does not have a coherent strategy for providing non-motorised transport infrastructure. This is despite the Department of Transport publishing comprehensive design guidelines for non-motorised facility design in 2003.

South Africa does not have a coherent transport strategy for vulnerable groups such as persons with disabilities, and the elderly. Where provided for, such initiatives tend to be project or programme specific and not guided by a countrywide strategy.

South Africa also has one of the world's worst records on road traffic safety (WHO, 2013), while many public transport users (especially train users) feel vulnerable when using the transport system and fear becoming crime victims (Page, Moeketsi and Schurink, 2001). Public transport users are also concerned and dissatisfied with safety of public transport vehicles (DoT, 2003a).

8.3.3 Environmental

The environmental goals of a sustainable transport system are:

- air pollution control and climate stability, through reducing emissions and exposure to harmful pollutants, and mitigating climate change impact;
- noise pollution prevention, by minimising exposure to traffic noise;
- water quality protection, by minimising water pollution and impervious surface area;
- open space and biodiversity protection, through minimising transport facility land use, encouraging more compact development and preserving high-quality habitat.

South Africa has a comprehensive Environmental Impact Assessment (EIA) framework, which is diligently implemented for transport infrastructure projects and usually includes traffic noise mitigation. In addition, the South African Bureau of Standards has a framework for measuring and controlling transport-generated noise. Furthermore, South Africa has a comprehensive biodiversity protection framework implemented by the National Biodiversity Institute, which is taken into account as part of the EIA process for transport infrastructure projects. Nonetheless, from a transport perspective the implementation of this framework tends to be at a project level, not at a system level.

Compared to Euro standards, emission rates of South African vehicles are much higher (Goyns, 2008), but no coherent strategy on management of transport emissions is in place. A baseline greenhouse gas inventory for the transport sector was compiled by the Department of Transport based on 2000 datasets. However, there is no coherent transport strategy for greenhouse gas emissions and climate change. Nor is there a coherent strategy for managing water pollution caused by the transport sector.

8.3.4 Governance

The governance goals of a sustainable transport system are:

- integrated, comprehensive and inclusive planning, with clearly defined planning processes, integrated analysis, strong citizen engagement and ease-cost planning;
- adequate funding for transport, through sustainable revenue streams to fund transport service delivery;
- appropriate human resource capacity, with an appropriately skilled workforce to manage the transport system.

The National Land Transport Act (DoT, 2009) is clear on the types of transport plans that should be formulated by different spheres of government. Key among these plans is the municipal integrated transport plan, which guides transport service delivery at a municipal level. While these plans have clear goals and objectives, they tend to fall short in terms of auditable planning targets. The phrase integrated transport planning is often used loosely, and the plans appear to be formulated more for legislative compliance rather than as service delivery tools. Municipalities are not using their transport-network ownership to implement integrated transport systems, and public transport tends to be managed as isolated routes as opposed to a network. In many municipalities, including metropolitan municipalities, integrated transport plans are either outdated or non-existent, and municipalities (as well as other government spheres and agencies) are implementing large-scale projects that are often not identified or incorporated in the approved integrated transport plans. For example, none of the municipal integrated plans in the province pre-identified and planned for the newly introduced urban tolling in Gauteng. The implication here is that the prioritisation of projects and programmes may not be optimal and best serve the communities in the municipalities.

As there is no coherent strategy for transport funding in South Africa, a mismatch often occurs between funding requirements and actual funding for transport. Maintenance of transport infrastructure tends to be underfunded (Wall, Milford and Kubuzie, 2007) and is not helped by the lack of a comprehensive analysis of the transport infrastructure backlog (which is a result of poor transport asset management practices).

Transport service delivery in municipalities is often hampered by the shortage of appropriately skilled personnel, with inadequate skills levels for critical technical positions (AGSA, 2013) and a dire shortage of engineering personnel in municipalities (Lawless, 2007).

The above assessment of the transport function in South Africa, carried out in terms of the sustainable transport measurement framework, shows that South Africa's transport policy is comprehensive. However, there are critical gaps in respect of translating policy into coherent strategies for implementation. When implementation does take place, it tends to be guided by project or programme goals and not coherent strategies.

Recommendations for rationalising transport subsidies

Some of the relevant recommendations made in many of the studies (DoT 1998, 2003b, 2004, 2006) commissioned by the Department of Transport (DoT) include:

- Subsidies should move gradually towards the unemployed poor, pensioners, learners in rural areas and isolated communities across the country, specifically in rural areas.
- Subsidised buses must be accessible to passengers with special needs, such as the disabled.
- Subsidised public transport services operating in parallel to each other should be identified and addressed.
- Historic commitment to rail deficit support and subsidised bus services to ex-homelands and Group Areas Act townships should cease to be the main rationale for subsidy policy.
- Full responsibility for municipal public transport should be devolved to the metropolitan and specified urban municipalities, together with the appropriate grants for infrastructure to initiate the new municipal public transport networks.
- Public transport funding streams should be consolidated.
- Entry as an operator should be on the basis of tendered contracts. Subsidies required for welfare considerations, or to promote public transport, should be through mechanisms that provide incentives for efficiency within the framework of transport plans.
- In the long term, operators should compete for the provision of subsidised rail and road-based public transport services, through competitive tendering processes. Tendering processes should make provision for the participation of historically disadvantaged enterprises and individuals. Passenger rail services, as part of the recommended public transport system at local level, should be subsidised through concessioning.
- Support should only be provided for existing or planned services, which are included in approved transport plans and form part of an integrated network of services.
- Subsidies allocated under the 'relief of distance burden' rationale should be continued but gradually reduced and, eventually, limited to commuting trips of 40 kilometres or less.
- A phased, intergovernmental programme for rationalising and coordinating the subsidisation of urban transport and housing should be formulated and implemented.
- In the medium to longer term, provincial and/or local funding should directly supplement transport subsidy levels through appropriate means, to partially replace national funding. Conditions specified in rationalisation plans prepared as part of integrated transport plans should be used as the subsidy qualification criteria.
- For road-based public transport, an indirect subsidy should prioritise the provision and maintenance of road infrastructure along the roads that are required for and that provide public transport.
- Only scheduled formalised public transport services or services that adhere to minimum service levels should attract subsidies.
- Minibus taxis could be subsidised if such services are provided in terms of contracts or similar agreements with government or agents thereof, and where a minimum frequency or level of service is specified.

The main reason for the poor implementation is that the above recommendations are not or are poorly incorporated into the municipal integrated transport plans. A more fundamental reason is that municipalities have poor control over the network, i.e. the authority to design and manage the transport network in line with specific network goals contained in the municipal integrated transport plan. Thus, any transport network interventions or changes would have to be aligned to the network performance goals set by the authority.

8.4 Addressing Public Transport Service Delivery Backlogs at Municipal Level

The key to addressing transport service delivery backlogs lies in strengthening the institutions responsible for the transport function, particularly the municipalities. For municipalities, this means increasing their capacity to control the transport network and providing appropriate resources to support this capability. Therefore, assigning functions to municipalities should take place within the context of strengthening the authority's control over the network.

The financing should seek to balance the transport system's social, economic and environmental goals. In the case of passenger transport operations, a desirable transport subsidy framework for South Africa must: (i) address social equity associated with structural poverty, (ii) encourage the productivity of public transport operations, and (iii) incentivise a modal shift from private to public transport (thereby reducing greenhouse gas emissions).

This model can generically be formulated as follows:

$$\text{Subsidybill} = [\text{KA}_{\text{MLL}} \cdot C_f + (1-\theta)N \cdot C_u] \beta \frac{MS_c}{MS_b}$$

KA_{MLL} (km) = Policy kilometre apportionment to designated travellers. This is obtainable from summing all the network kilometres used by designated travellers in a specific period.

C_f (R/km) = Per km fare charged to passengers

θ (Ratio with no units) = Expected operations cost recovery ratio

N (km) = Operational kilometres

C_u (R/km) = Unit cost of operations expressed in terms or R/km

MS_b (Ratio without units) = Modal split in the base year expressed, for the base year, as a ratio between passenger kilometres in the area and vehicle kilometres

MS_c (Ratio without units) = Current modal split expressed, in the current year, as a ratio between passenger kilometres in the area and vehicle kilometres

β (Scaling factor without units) = Modal split policy incentive factor. $\beta = \frac{MS_b}{MS_c}$ if $\frac{MS_c}{MS_b} < 1$. The value of this parameter is determined by the authority and would be expected to be an increasing function of the ratio $\frac{MS_c}{MS_b}$.

The social component of the model allocates the subsidy based on a specified number of free kilometres per month to designated travellers, particularly recipients of social grants. The economic component of the model relates the subsidy to the productivity of the service in terms of contracted cost recovery. The environmental component incentivises increased public transport demand relative to private travel and, when implemented, should be sufficiently attractive to operators. The amount of subsidy required to support the environmental component of the framework depends on the authority's policy on emission control and affordability of the incentives.

Indications are that the subsidy required to support this framework would be in the order of R45–R50-billion, which is more than 2.6 times the current subsidy bill. However, it should be noted that the current subsidy supports only a tiny proportion of the population and is not strictly aligned to transport policy.

The actual implementation of the framework would require municipalities to prioritise expenditure in line with their network priorities (within the confines of the proposed framework). This requirement in particular makes the assignment of contracting and regulatory functions to municipalities critical. The contracting function refers to managing public transport contracts (subsidised, commercial and negotiated contracts), inclusive of the design, adjudication, awarding, and monitoring of the contracts. The regulatory (or licencing) function refers to administering and adjudicating operating licence applications to control the network supply.

8.5 Conclusion

A continuously improving transport system is a prerequisite for a globally competitive South Africa. While there are pockets of excellence, the country's transport systems is largely characterised by large service delivery backlogs. This is often acknowledged in household travel surveys, where large proportions of people indicate, for example, that they do not use public transport because it doesn't exist within their functional spaces. Also, despite the country's progressive transport policy, its implementation has lagged behind. This was illustrated through benchmarking South Africa's transport system against the sustainable transport measurement framework, which showed that, while South Africa's transport policy is progressive, there are critical gaps in respect of translating policy into coherent strategies for implementation.

One of the key reasons for this deteriorating performance is that the concurrency of the transport delivery across all spheres of government, tends to mask accountability. However, legally municipal transport plans assign most of the accountability to municipalities, especially in respect of accounting to communities, although the municipalities do have some of the necessary powers. Having control over the network is fundamental to effective transport service delivery, which is why transport policy supports the assignment of appropriate transport functions to municipalities.

The contracting and regulatory functions, which currently rest with provinces, were investigated in this study and deemed to be appropriate for assignment to municipalities. Assignment of these functions will in theory allow municipalities to take full accountability of public transport service delivery, given that the functions would allow the municipalities to manage transport as a network. A public transport network that is designed and managed as an integrated network also makes aligning transport subsidies to network objectives easier. However, in South Africa, the transport system operates isolated modes of transport and the public transport subsidy is allocated independently from the municipal integrated transport plans.

The transport subsidy framework should seek to address social equity, encourage productivity of public transport operations and promote a shift from private to public transport. The proposed subsidy model found that the subsidy required to support this framework would be in the order of R45–R50-billion, which is more than 2.6 times the current subsidy bill. However, the current subsidy supports only a tiny proportion of the population and is not strictly aligned to transport policy. Implementation of the framework would require municipalities to prioritise expenditure in line with their network priorities (within the confines of the proposed framework).

The key lies in strengthening the institutions responsible for the transport function, particularly the municipalities. For municipalities, this means increasing their capacity to control the transport network and providing appropriate resources to support this capability.

8.6 Recommendations

With respect to improving public transport for better mobility, the Commission recommends that:

1. All municipal integrated transport plans indicate clearly how the municipalities intend to exercise control over the network, including the required resources. This should be one of the minimum requirements for preparing integrated transport plans and should be gazetted accordingly.
2. The Department of Transport (the custodians of national transport policy) formulates and implements a transport subsidy framework, which explicitly incorporates social welfare, service productivity and environmental management, which are the three aspects endorsed by national transport policy.
3. Given the ever increasing complexity of modern transport networks, municipalities are guided on the minimum skill set required to be able to manage modern transport systems. This is one of the critical interventions to unlock service delivery constraints and should be carried out jointly by the Department of Transport and the organised local government.
4. A comprehensive review of municipal integrated transport plans is carried out, with a view to identifying gaps that need to be addressed. This should be carried out jointly by the Department of Transport and the organised local government.

CHAPTER 9

Administered Prices: The Impact of Electricity Price Increases on Municipalities

9.1 Introduction

In common with other countries, South Africa faces significant challenges trying to balance security, stability and affordability in energy supply, while at the same time addressing substantial backlogs in access to electricity. Government has struggled to deliver stable, credible long-term policy/regulatory environments capable of attracting private investment at the scale required to meet these challenges. For example, the uncertainty and stalled process of transferring assets from Eskom and local governments to six Regional Electricity Distributors (REDs) caused much damage to the industry. After years of having surplus electricity generation, South Africa is currently at a critical juncture, needing to make a new wave of investments. Investments in the power sector are geared towards overcoming supply constraints that are currently being addressed through load shedding. While current projects (such as 'returns to service', co-generation and gas turbines) will lead to some increases in electricity supply, most of the additional supply will come from major new investments such as the Medupi and Kusile coal-fired power stations. Therefore, demand-side management is critical, centred on an overhauled electricity pricing structure that reflects full economic costs to encourage efficiency and minimise wastage. Understanding the implied trade-offs and opportunity costs of such huge changes in pricing structure is important and requires a re-assessment of revenue allocation policy.

Eskom has a monopoly on the generation and transmission of electricity, and municipalities purchase bulk electricity from Eskom in order to fulfil their constitutional mandate of electricity distribution. During apartheid, electricity was subsidised and Eskom tariffs were kept low, declining in real terms between 1980 and 2007. This resulted in an inability to fund the development of new electricity generation capacity required to keep pace with increased economic growth and electricity demand, and to carry out maintenance and rehabilitation of the electricity distribution network (Eskom, 2012). Eventually in 2008/09, after a R9-billion loss threatened the sustainability of the electricity sector, Eskom received a government bailout. Since then, there has been a concerted shift towards tariffs that are more closely aligned to costs³³. Because of the historical under-pricing, the tariff increases have been significant (between 2008 and 2011, electricity prices increased by 78% in real terms), raising concerns around affordability for end users (Eskom, 2012).

Tariff increases affect not only end users of electricity but also municipalities. Municipalities provide access to basic services (including electricity) that facilitate both social and economic development. The provision of electricity is a significant source of revenue (electricity tariffs represent approximately one-third of total municipal revenue) and a major expenditure item for municipalities. Significant tariff increases, coupled with the poor economic environment, present a dilemma for municipalities because the electricity sector is subject to administered prices³⁴. Municipalities purchase bulk electricity at the given price and then resell electricity (at a higher tariff) to end users. However, the National Energy Regulator of South Africa (Nersa) imposes regulatory restrictions that limit the extent to which tariffs can be increased. This effectively limits how much of the increased costs can be passed on to end users. This is a particularly important limitation in the context of developmental local government because revenues generated from electricity distribution enable municipalities to reinvest in the sector and to cross-subsidise the delivery of electricity to poor households. Electricity losses and theft further exacerbate the situation. Municipalities have historically overpriced electricity and charged high tariffs. The resulting large surpluses (which should be reinvested in the electricity sector) are used to fund the delivery of non-electricity services and other expenditure items such as wages (Bisseker, 2012; Barnard, 2010). The consequence is that municipalities depend on electricity profits beyond what is desirable and legislatively permissible.

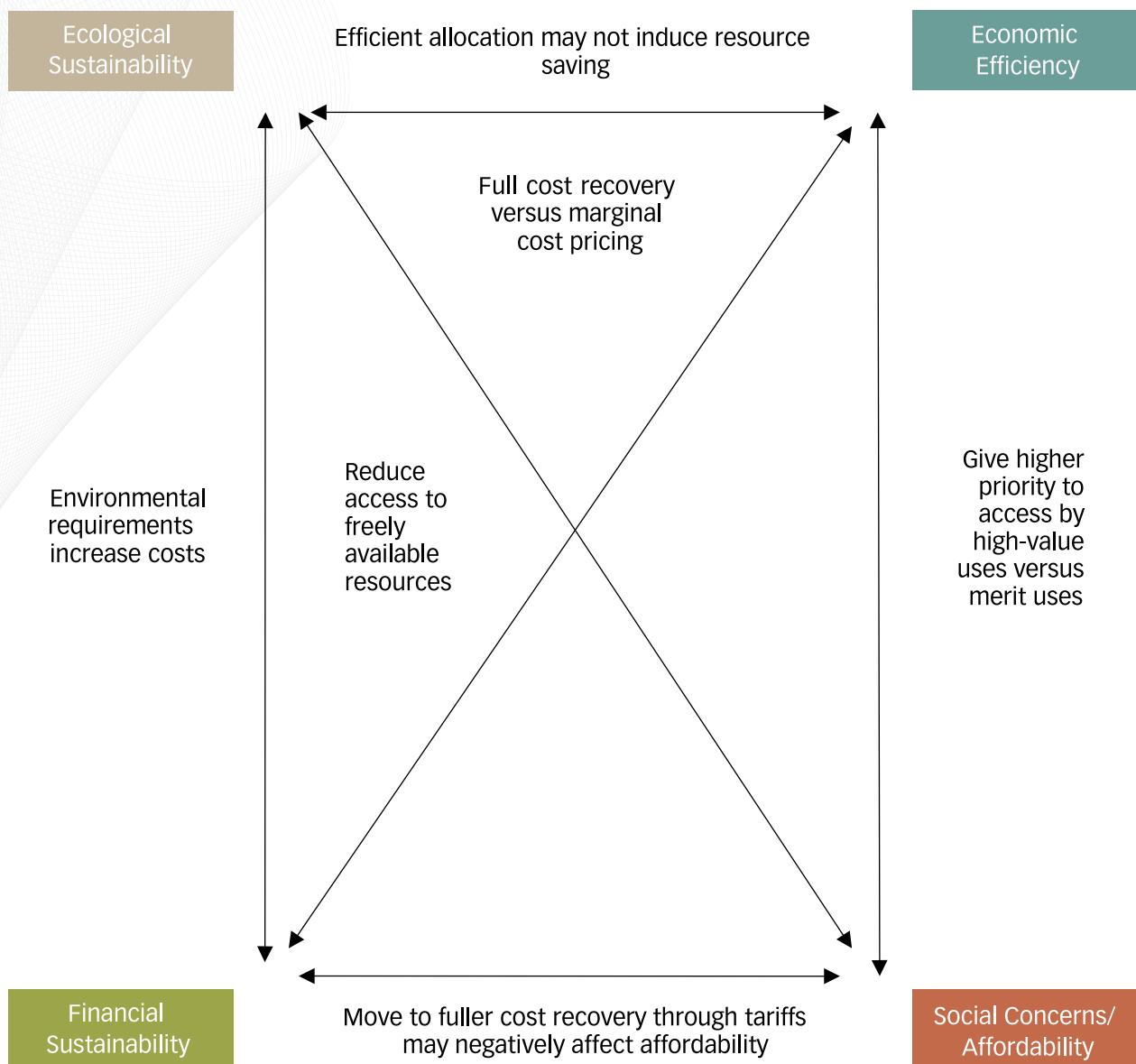
In essence, local authorities have to make a number of hard decisions regarding competing policy objectives. For example, providing free basic electricity (FBE) to poor consumers while keeping tariffs affordable for other consumers, and ensuring more efficient and sustainable service delivery by pursuing tariffs that are more cost reflective. Adding to the competing policy objectives is the increasing priority being given to environmental sustainability. Figure 30 captures the competing objectives and trade-offs associated with selecting any one course of action.

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³³ In addition to costs related to 'production' of electricity, climate change concerns are also creating pressures for increasing electricity prices.

³⁴ This is also the case for the telecommunications, transport and water sectors

Figure 30: Trade-offs affecting tariff levels and structures



Source: Gawel and Bretschneider, 2011.

The dilemma described above raises the question of the impact that electricity price increases will have on the finances of municipalities. Studies on the impact of recent electricity price increases have focused mainly on end users (Altman et al., 2010; Nedlac, 2010), the industrial sector or the economy as a whole (Cameron and Rossouw, 2012; Inglesi-Lotz, 2012). The objective of this chapter is to establish the impact of electricity price increases on the revenue and expenditure of different categories of municipalities. After providing a background to the institutional and regulatory arrangements in place, the methodology used is explained. The results and findings are then presented, followed by concluding remarks and recommendations.

9.2 Institutional and Regulatory Arrangements

The supply and distribution of electricity is state-led. Through its state-owned entity, Eskom, national government is responsible for the bulk (96%) of electricity generation³⁵ and all transmission³⁶ (RSA, 2006). Schedule 4b of the Constitution assigns responsibility for distribution of electricity to municipalities (RSA, 1996). Although only metropolitan and local municipalities distribute electricity, they are allowed to delegate service delivery to an entity³⁷. In practice, Eskom and licensed municipal distributors undertake the distribution activity. The municipality has to pay Eskom directly in the case where Eskom distributes electricity on its behalf.

Oversight of the electricity sector lies with National Energy Regulator of South Africa (Nersa). In terms of the Electricity Regulation Act, Nersa has wide-ranging powers to ensure regulatory compliance. Its role includes: considering applications for constructing and operating distribution facilities, issuing rules to facilitate the implementation of government's electricity sector policy and objectives, regulating prices and tariffs, enforcing performance and compliance, and acting against instances of non-compliance (RSA, 2006). Nersa is central in setting the tariffs (1) charged by Eskom to municipalities and (2) charged by municipalities to end users. A municipality wanting to exceed the tariff increases charged to end users applies to Nersa for an above-guideline increase.

Various pieces of legislation further regulate the electricity-distribution operations of municipalities:

- The FBE policy stipulates the minimum amount of electricity that each municipality must provide free of charge to poor households (RSA, 2003). The amount of FBE is currently set at 50 kilowatt hours (kWh). National Treasury subsidises the delivery of FBE via the Local Government Equitable Share allocation and uses a monthly income of R2300 as the threshold for determining indigent households (National Treasury, 2013). Municipalities may increase the amount of FBE provided and the monthly income threshold used to define indigent households, but all municipalities are expected to abide by the minimums set out in the FBE policy.
- The Municipal Systems Act provides guidance to municipalities on the principles that should underpin the levying of fees for basic services. Section 74 of the Act calls for special tariffs or subsidisation of service delivery to poor households, while non-poor users should be charged tariffs that are reasonably associated with costs of provision (RSA, 2000).
- The Municipal Finance Management Act (MFMA), in Sections 41 and 42, manages the interface between state utilities (in this case, Eskom, a municipality and National Treasury) and regulatory agencies (Nersa) within a sector. In accordance with the MFMA, Eskom must report monthly to the National Treasury on the amount paid by each municipality for bulk electricity, any arrears and actions taken to recover arrears. In terms of Section 42 of the MFMA, Eskom must submit plans for any increase in the price of bulk electricity to both the Department of Energy and Nersa. Eskom's submission must contain the written views of National Treasury, South African Local Government Association (SALGA) or any municipality and explain how these views have been taken into account (RSA, 2004).

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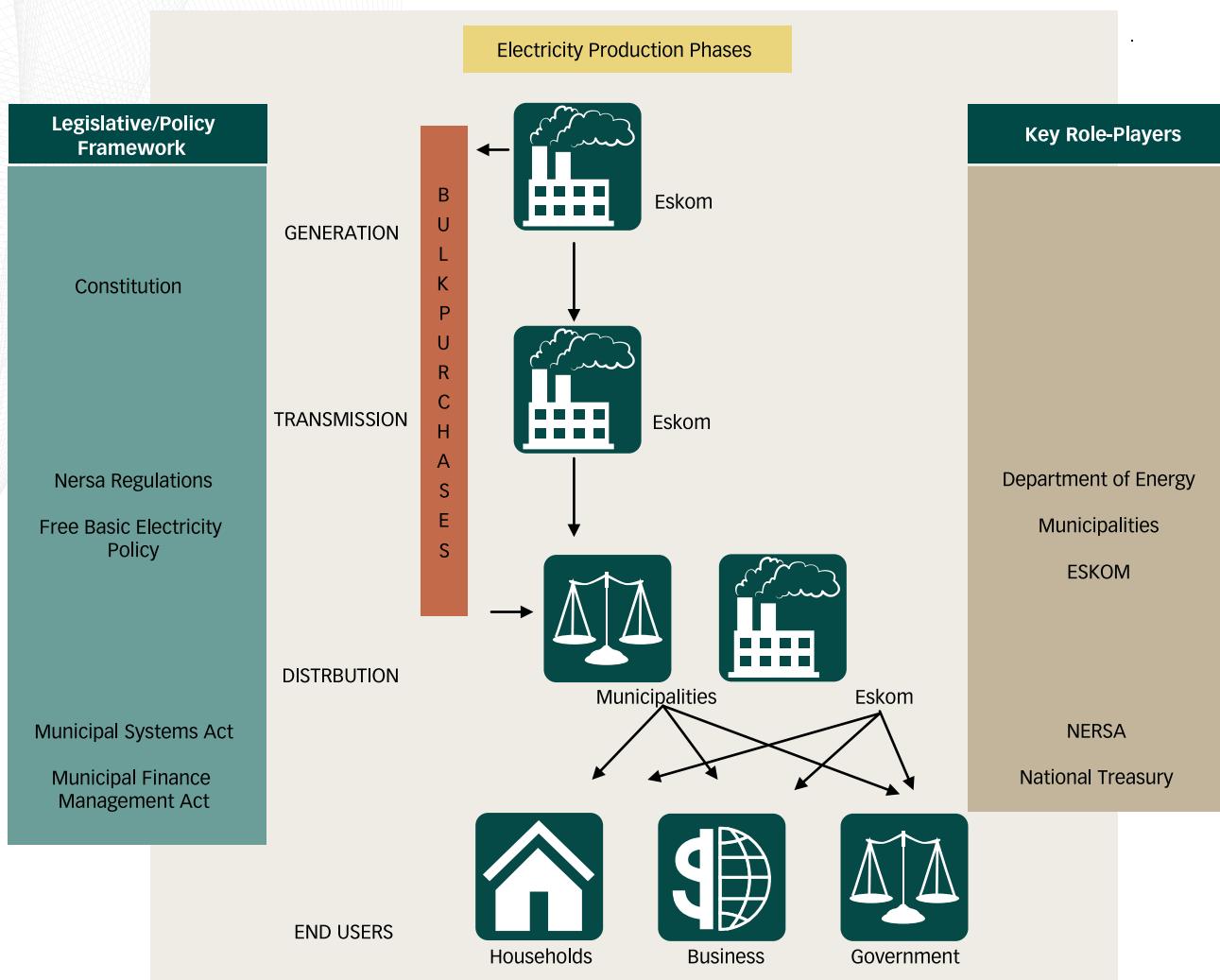
³⁵ Chapter 1 of the Electricity Regulation Act defines electricity generation as "...the production of electricity by any means".

³⁶ Chapter 1 of the Electricity Regulation Act defines electricity transmission as "the conveyance of electricity through a transmission power system".

³⁷ According to Chapter One of the Municipal Systems Act (2000), a municipal entity refers to "a company, co-operative, trust, fund or any other corporate entity established in terms of any applicable national or provincial legislation and which operates under the ownership control of one or more municipalities and includes in the case of a company under such ownership control, any subsidiaries of that company".

Figure 31 graphically illustrates the structure and various role-players in the electricity distribution industry.

Figure 31: Structure of the electricity generation and distribution sector in South Africa



9.3 Methodology

Econometric modelling was used to quantify the impact of increases in electricity prices on municipal expenditure and revenues. Panel data spanning a ten year period (2003/04–2012/13) was used in the revenue and expenditure models. A fixed effects model was used to account for the unique, time-invariant characteristics of municipalities and its appropriateness confirmed with the Hausman test. Interaction variables³⁸ were used to be able to distinguish the impact of electricity price increases on a metropolitan municipality from the impact on a large town. Given that bulk electricity purchases are the dominant cost that municipalities incur in the distribution of electricity, the annual increases in bulk electricity purchases is used. This information was sourced from Nersa. Municipal financial data was sourced from the National Treasury's local government database and Section 71 reports³⁹.

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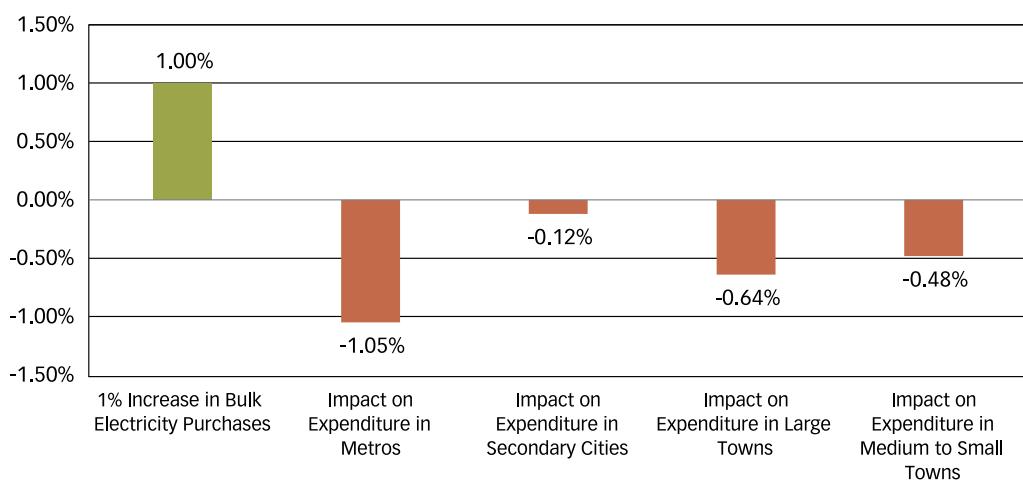
³⁸An interaction occurs when the magnitude of the effect of one independent variable (X) on a dependent variable (Y) varies as a function of a second independent variable (Z). Here the effect of an increase in bulk electricity prices on expenditure or revenue will vary according to the category of municipality.

³⁹These are reports required in terms of Section 71 of the MFMA, whereby the municipal accounting officer must submit a budget report every month to the municipal mayor and the relevant provincial treasury.

9.4 Impact of Electricity Price Increases

Figures 32 and 33 show how a 1% increase in bulk electricity purchases affects municipal expenditure and revenue in a particular municipal category⁴⁰. An increase in bulk electricity purchases was found to have a statistically significant and negative impact on all municipal categories, particularly the metros. Given urbanisation and the greater demand for basic services in metros, increases in input costs would be expected to affect output. If municipal expenditure is used as a proxy for output, then this finding suggests that increases in bulk prices have a negative impact on municipal electricity distribution. It also suggests that electricity price increases have acted as a brake on demand for electricity from end users.

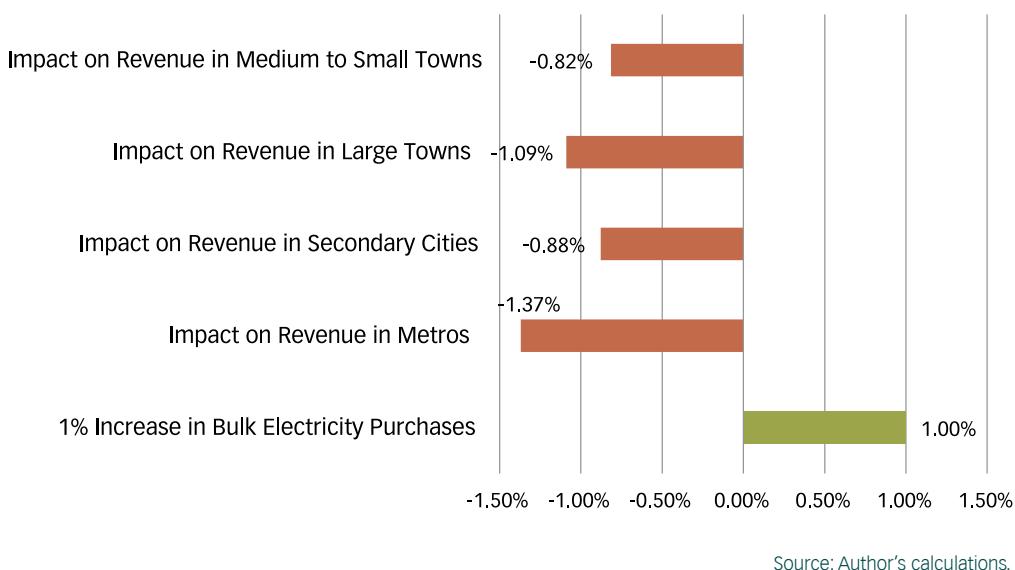
Figure 32: Impact of electricity price increases on municipal expenditure⁴¹



Source: Author's calculations.

Figure 33 shows that increases in bulk electricity purchases have a statistically significant and negative impact on municipal revenue for all the categories of municipalities. The revenue of metros and large towns seems particularly vulnerable to increases in bulk electricity purchases.

Figure 33: Impact of electricity price increases on municipal revenue⁴²



Source: Author's calculations.

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⁴⁰ The percentages for the various municipal categories reflect the coefficients for the interactive variables created and used in the econometric modelling exercise. For example, a 1% increase in bulk electricity purchases in a metro would lead to a -1.05% impact on expenditure in a metro.

⁴¹ Except for secondary cities, all findings were significant.

⁴² Findings in the case of all municipal categories were statistically significant.

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⁴³ See Chapter 12 ('Challenges, constraints and best practices in maintaining and rehabilitating water and electricity distribution infrastructure') in the Commission's 2014/15 Submission for the Division of Revenue. This document can be accessed at: www.ffc.co.za.

For most municipal categories, increases in bulk electricity costs have a statistically negative impact on municipal expenditure and revenue. This finding should be contextualised against the following two aspects:

Re-investment into the sector

A negative effect on municipal revenue could jeopardise re-investment in maintenance and renewals. Section 74(2) (d) of the Municipal Systems Act (RSA, 2000) envisages tariff revenues being reinvested in capital, operating, maintenance, administration and replacement-related costs associated with a service. This provision is important and is aimed at ensuring that the infrastructure underpinning a service is well cared for through effective spending on maintenance and asset renewal. Recent research⁴³ by the Commission indicates that municipalities under-budget and under-spend on maintenance and renewals. In 2011/12, municipalities (in aggregate) under-budgeted by R5-billion and under-spent by nearly R10-billion on general maintenance. Within the electricity distribution industry, the backlog in terms of asset renewal is between R8-billion and R41-billion.

Environmental sustainability measures

Major developments within the energy sector are the completion of two coal-fired power stations (Medupi and Kusile) and rules and regulations to ensure environmental sustainability. For example, the implementation of a carbon tax (postponed to 2016), the National Environmental Management Air Quality Act of 2004 and the 2012 National Framework for Air Quality Management. Compliance with these regulations will affect Eskom, and the associated compliance costs will be transferred to end users, either directly from Eskom or via municipal distributors. In the case of municipal distributors, these increased costs are likely to be transferred via higher prices for bulk electricity purchases.

9.5 Conclusion

The historic subsidisation of electricity prices, which kept Eskom tariffs low, resulted in a lack of funding for the development of new electricity generation capacity needed to keep pace with increased demand. Since 2008/09, there has been a shift towards tariffs that are more closely aligned to costs. The result has been significant tariff increases that affect not only the end user but also municipalities. Municipalities have historically charged high tariffs, using the large surpluses (which should be reinvested in the electricity sector) to fund other non-electricity services and expenditure items. However, Nersa regulatory restrictions mean that municipalities are unable to pass on the significant tariff increases to end users. This is an important limitation in the context of developmental local government because revenues generated from electricity distribution enable municipalities to reinvest in the sector and to cross-subsidise the delivery of electricity to poor households. The impact of increases in electricity prices on municipal expenditure and revenues was quantified using econometric modelling. The results showed that increasing bulk electricity costs will have a significant impact on municipal expenditure and revenue.

The negative impact is of concern for two reasons. First, it threatens the envisaged use of electricity revenue as a source of funding to sustain and ensure sector continuity through investment in maintenance and asset renewal. Second, the growing priority attached to environmental sustainability is likely to increase costs, which will in all likelihood be passed on to municipal electricity distributors. This will endanger the sustainability of the sector and the ability of a municipality to cross-subsidise service delivery to lower-income groups. Government needs to manage the risk of substantial future price increases, particularly given the potential negative impact that increases in the price of bulk electricity purchases can have on municipalities and their ability to invest in basic service delivery infrastructure and/or to cross-subsidise general municipal expenditure.

9.6 Recommendations

With respect to electricity pricing, the Commission recommends that:

1. Government puts in place a plan to manage the risks to municipalities associated with increases in the price of bulk electricity purchases. Such a plan should:
 - a. Consider the implications of increases in the price of bulk electricity purchases on municipal expenditure (to the extent that increases may crowd out expenditure on other items) and revenue (to the extent that revenue needed to fund maintenance, asset renewal or cross-subsidisation may be eroded).
 - b. Be explicit in terms of the impact that increased prices of bulk electricity purchases will have on different categories of municipalities. The crafting of this plan is particularly important given developments aimed at prioritising environmental sustainability such as for example the pending implementation of the carbon tax and its implication for the cost of bulk electricity purchases.

CHAPTER 10

Better Human Settlements through Improved Planning and Funding

10.1 Introduction

Like other developing countries, South Africa is experiencing rapid urbanisation growth. Despite delivering over two million fully subsidised houses to low-income households since 1994, the under-supply of housing, especially in urban areas, continues to be a challenge for government. The state does not have the financial resources to provide fully subsidised houses to those in need (FFC, 2012). In 2004, the government introduced the Breaking New Ground (BNG) policy, with the aim of achieving "a non-racial, integrated society through the development of human settlements and quality housing" (DHS, 2004: 7). The BNG represented a move away from building houses to developing human settlements, whereby residents have access to economic opportunities, services, activities and different types of housing.

If the BNG objectives are to be met, and government is to have a meaningful impact on South Africa's national development goals as articulated by the National Development Plan (2011) and the constitutional right to adequate housing, understanding housing demand is crucial. Housing demand is multi-dimensional and includes housing type, location and tenure, as well as household circumstance and lifecycle. Yet insufficient attention has been given to the different dimensions of housing demand, and how demand changes over time as households evolve. This lack of understanding can result in an inability to plan adequately for future housing needs and to provide relevant housing stock in relevant locations.

The lack of understanding of what constitutes housing demand was identified at the public hearings⁴⁴ organised by the Financial and Fiscal Commission (the Commission) in 2011 and 2012, as one of the challenges facing the human settlements sector. Other challenges included administrative efficiencies relating to the transfer of title deeds and limited choices for subsidy beneficiaries, as well as the perverse incentives created by South Africa's funding and housing delivery system. Compared to other countries such as Brazil, households in South Africa are inactive in addressing their own housing needs, as indicated by the slow rate of self-build housing initiatives⁴⁵ and the length of time households take to improve housing conditions.⁴⁶

Many of these challenges are addressed in the Commission's final report, but understanding housing demand and self-build housing initiatives are two aspects that are outstanding. This chapter evaluates housing demand in South Africa, with a view of understanding the housing demand (through the 'housing ladder'⁴⁷) and self-build housing. After describing the methodology, key findings are discussed, following by some concluding remarks and recommendations with respect to housing demand and self-build housing initiatives.

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⁴⁴ The public hearings were held in October 2011 and November 2012 to establish the challenges facing the human settlements sector and to come up with alternative funding and housing-delivery options (FFC, 2011 and 2012). The final report on alternative options for delivery and financing of housing was tabled in Parliament in 2013 and is available at wwwffc.co.za.

⁴⁵ Self-build housing refers to housing units constructed by the individual owners, using their own resources to cover materials and costs, with or without contracting for a local builder. Self-build housing is more common than subsidy housing and is found in both urban and rural areas.

⁴⁶ For example, in Brazil households take about five or less years to improve their housing conditions, to move from informal settlements to a decent formal housing. In contrast, in South Africa informal settlements remain in the same state for a number of years until government intervenes or provides free RDP housing.

⁴⁷ Housing ladder in this case refers to changes in a household's preferences (of housing typology, location and form of tenure) that are influenced by a number of variables, including income levels, ages and stages in life (for example marital status and size of household).

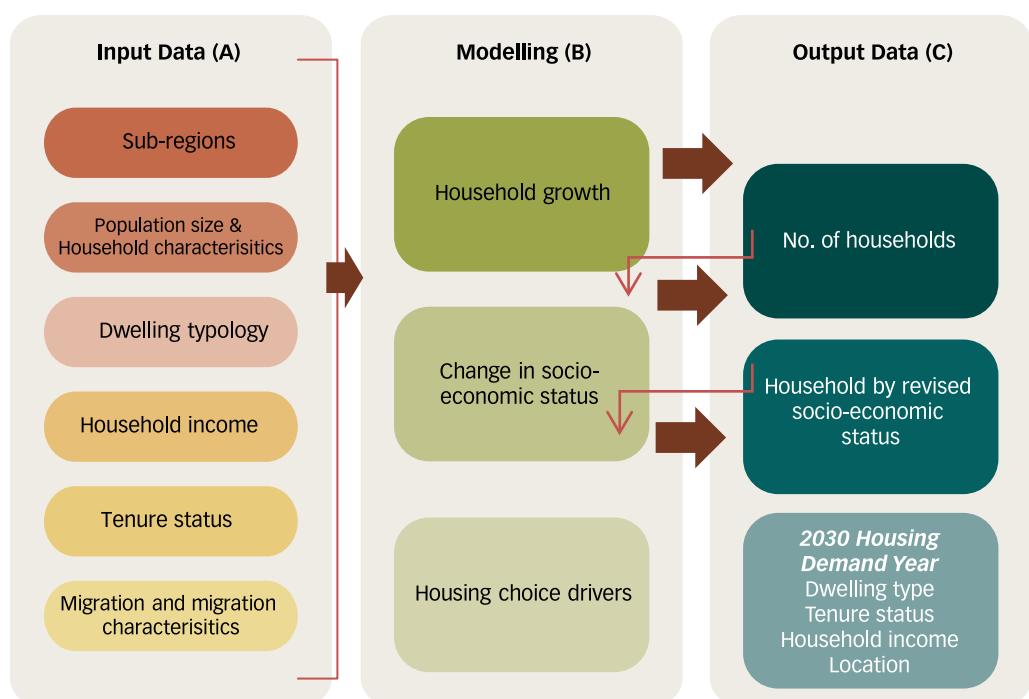
PART 3

10.2 Methodology

This chapter relies on both qualitative and quantitative research methods. Two surveys were carried out. The first survey was to understand housing demand and covered a total of 544 households in the City of Tshwane. The second survey was of self-build housing initiatives at four sites (two in Gauteng and one each in Limpopo and Mpumalanga) and consisted of a total of 60 in-depth interviews (15 interviews per site).⁴⁸

Figure 34 shows the housing demand model⁴⁹ used to estimate and forecast future housing demand per key strategic region within the City of Tshwane. Housing demand (in terms of type, tenure and location of housing) was estimated based on (i) Business as Usual (BAU) or status quo according to current trajectory or housing policy and (ii) future housing aspirations of households given their current socio-economic status.⁵⁰ The model takes into account the number of households per income group, the number of households per location,⁵¹ projected tenure choices and housing typologies. Variables considered for future growth included the percentage split in urban and rural population per income level, household sizes of urban population, total population growth, urban and rural growth per annum, and economic performance and income level.

Figure 34: Model flow overview



⁴⁸ For exact areas covered by the surveys, please refer to the Technical Report.

⁴⁹ The housing demand model developed has been designed to be flexible enough to be used in any city utilising that city's specific housing needs data.

⁵⁰ Household aspirations have been kept realistic by taking into account a number of key socio-economic factors including income. For example, a household currently residing in an informal settlement on the outskirts of a built-up area or township earning about R2500 cannot realistically aspire to move to a higher income node such as Sandton.

⁵¹ Location categories are: CBD (3km radius), Nodal points (1km radius with nodes >R5000 million gross value add (GVA)), Intermediate suburbs (Pretoria North, Pretoria East, Pretoria West, Akasia, Centurion), Outskirts (Atteridgeville, Mamelodi, Olievenhoutbos), Isolated towns (Winterveld, Soshanguve/Mapobane, Hammanskraal), Tribal or Traditional (Bronkhorstspruit, Cullinan, etc.) and Rural (rural farms).

The analysis of self-build housing initiatives used data from the Department of Science and Technology research findings relating to the larger *Spatial Temporal Evidence for Planning South Africa* (StepSA) and the 2001 and 2011 Census data. The quality of housing valued at less than R2500 (constructed from non-durable materials for immediate shelter) was used to estimate the level of need for housing intervention. While acknowledging that many different categories of poor households are in need of government assistance to improve their housing conditions, this chapter focuses on two of the most vulnerable categories: female-headed households with children under the age of 19 years and households over the age of 40 years earning below R2500. The last part of the study provides an estimation of the baseline subsidy needed to meet the housing needs of households who are entirely unable to contribute to their housing needs.

10.3 Projected urban housing demand

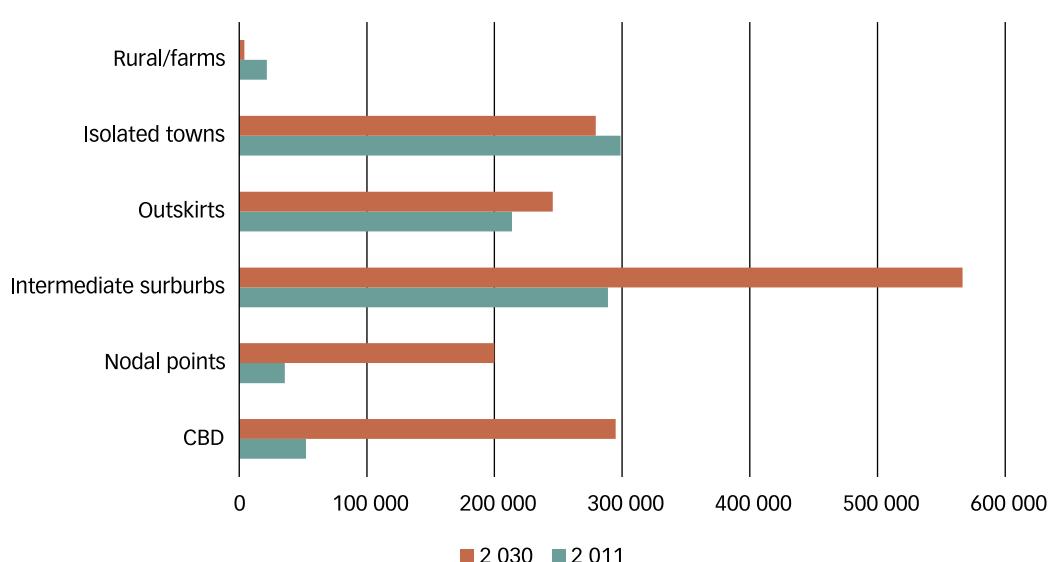
The household income level (and its likelihood to change in the future) is key to understanding and projecting housing demand. Income levels of different income groups were compared between 2011 (base year) and 2030 (projected using household aspirations). As Table 30 shows, the percentage of households earning between R0 and R3200 per month will decrease, from 48% to 47%. The same applies to the income group of between R6401 and R12,800, decreasing from 12% to 11%.

Table 30: Projected number of households per income group

HOUSEHOLD INCOME GROUP		BASELINE		PROJECTED	
Status Quo		2011	Percentage	2030	Percentage
Status Quo	R0-R3 200	437 506	48	763 293	48
	R3 201-R6 400	121 121	13	211 313	13
	R6 401-R12 800	107 404	12	187 382	12
	R12 801+	245 440	27	428 206	27
Total		911 471	100	1 590 195	100
Aspirations	R0-R3 200	437 506	48	593 845	47
	R3 201-R6 400	121 121	13	193 006	13
	R6 401-R12 800	107 404	12	165 845	11
	R12 801+	245 440	27	637 499	28
Total		911 471	100	1 590 195	100

While only small variations are found between the BAU scenario and the aspiration scenario based on income groups, the picture is very different for the distribution of households. As Figure 35 illustrates, the distribution of households by location will move strongly in favour of urban locations. Between 2011 and 2030, households will aspire to move from rural areas and isolated towns to urban areas. By 2030, the locations with the greatest increase in households will be intermediate suburbs, nodal points and, especially, the Central Business District (CBD).

Figure 35: Number of households per location (2011 and 2030)



Under both scenarios, the number of households in the CBD will increase by 2030 (Figure 36). Under the BAU scenario, the number of households in the CBD are projected to increase by 80% (from 52 000 in 2011 to 93 000 in 2030). However, when household aspirations are taken into account, the number of households living in the CBD will increase to 214 000 by 2030. The model also looked at the type of tenure housing that would predominate by 2030. As Figure 37 shows, there will be a continuous steady shift from ownership to rental as preferred form of tenure. For example, rental as form of tenure is projected to increase by 17% from 2011 to 2030, while ownership is projected to decrease over the same period.

Figure 36: Number of households in the CBD

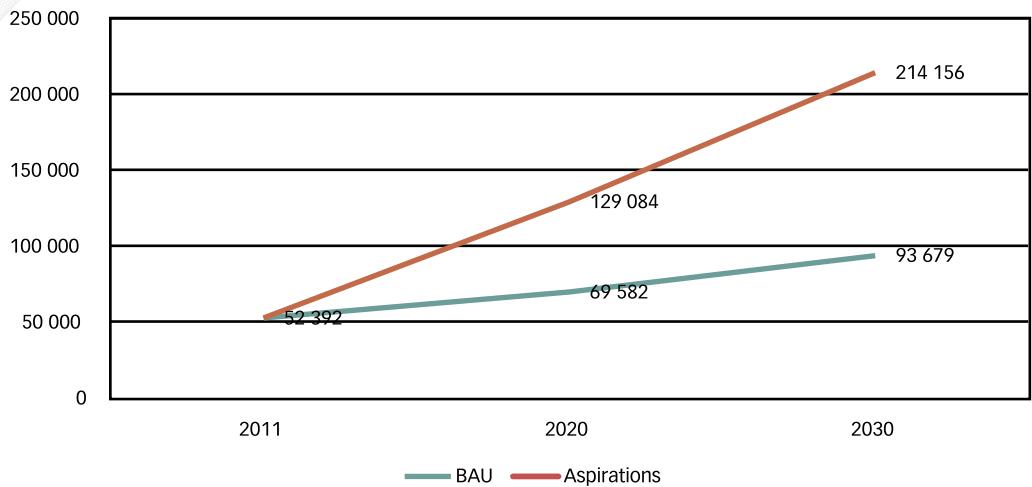
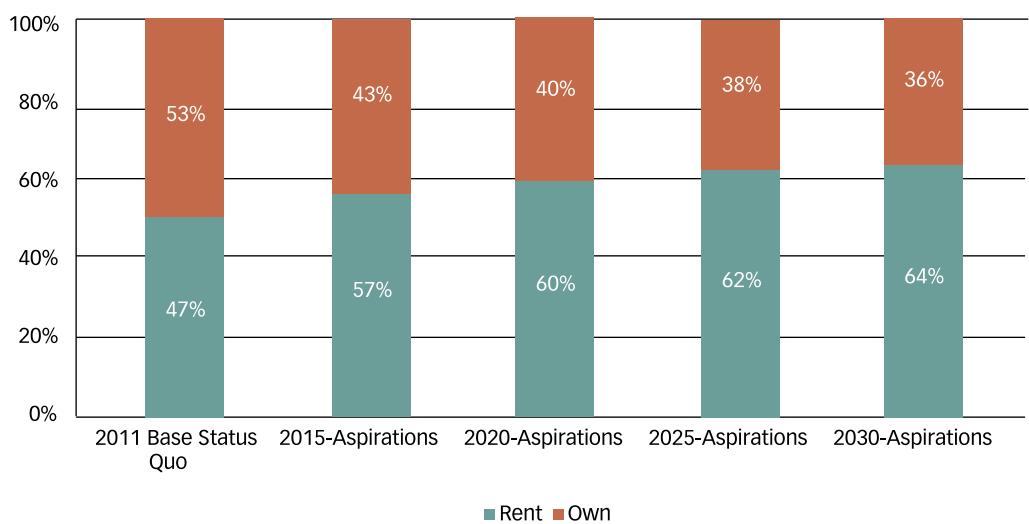
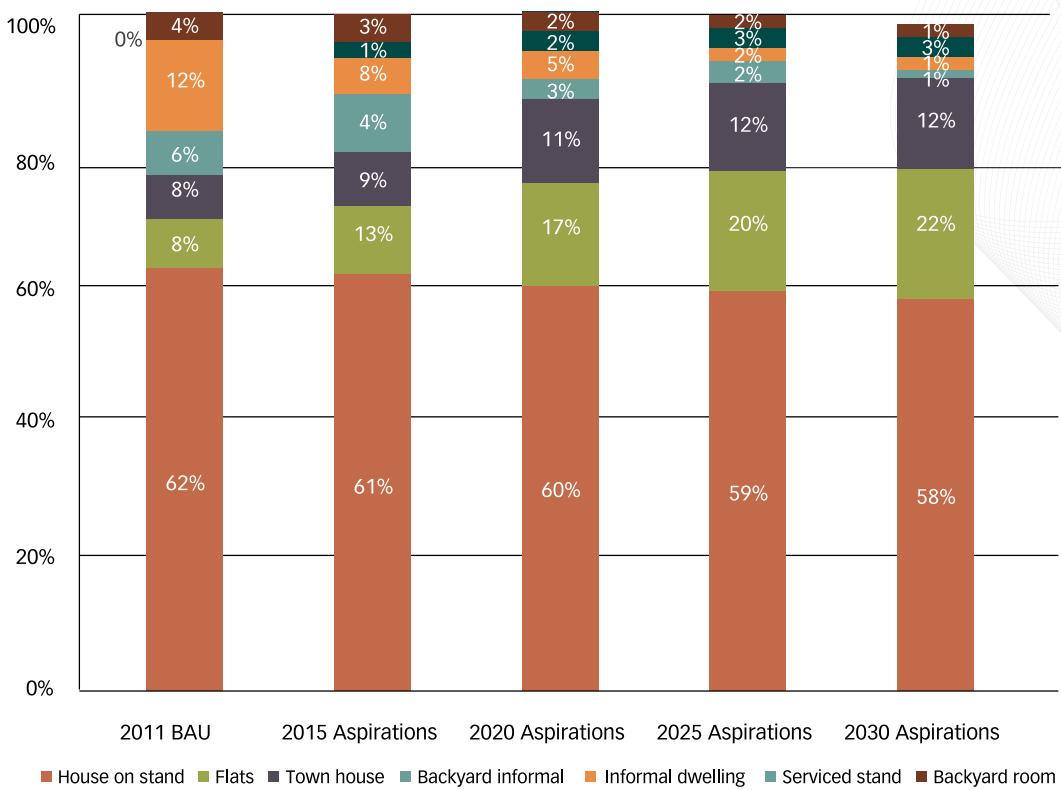


Figure 37: Changes in preferred form of tenure by 2030



Lastly, the model looked at the type of housing that would predominate by the 2030 in the different location categories. The results show a clear difference between the housing typologies under the BAU scenario and aspirations to 2030. As Figure 38 illustrates there will be a percentage increase in flats and townhouses between 2011 and 2030. This is in line with the results already discussed about the increase in the number of households preferring to rent in the CBD and intermediate suburbs. Figure 38 illustrates an increase of 14% and 4% in flat and townhouses typologies respectively between 2011 and 2030.

Figure 38: Changes in preferred housing typology by 2030



10.4 Key levers to self-build housing and most vulnerable households

The survey found that the key levers for self-build include: availability and access to uncontested land,⁵² agreements for upgrading the settlement, allocation of housing numbers and recording of occupiers, provision or upgrading of infrastructure, and formal registration of land.

With respect to the most vulnerable household groups, the chapter has identified that certain groups of households living in inappropriate housing structures are likely to have more difficulty than others in mobilising the necessary resources to build new decent quality housing. Therefore, it is important to distinguish between:

- (i) Poor households that need their current low-quality housing replaced but are likely to be able to use the assisted self-build option, as they are actively mobile and are using lower-quality housing options as a stepping stone.
- (ii) Poor households that will continue to need subsidy housing provided free of charge because of poverty and structural handicaps.

The survey identified two groups of households earning less than R2500 per month as the most vulnerable: female-headed households and households containing adults over the age of 40 years who are likely to remain unemployed⁵³.

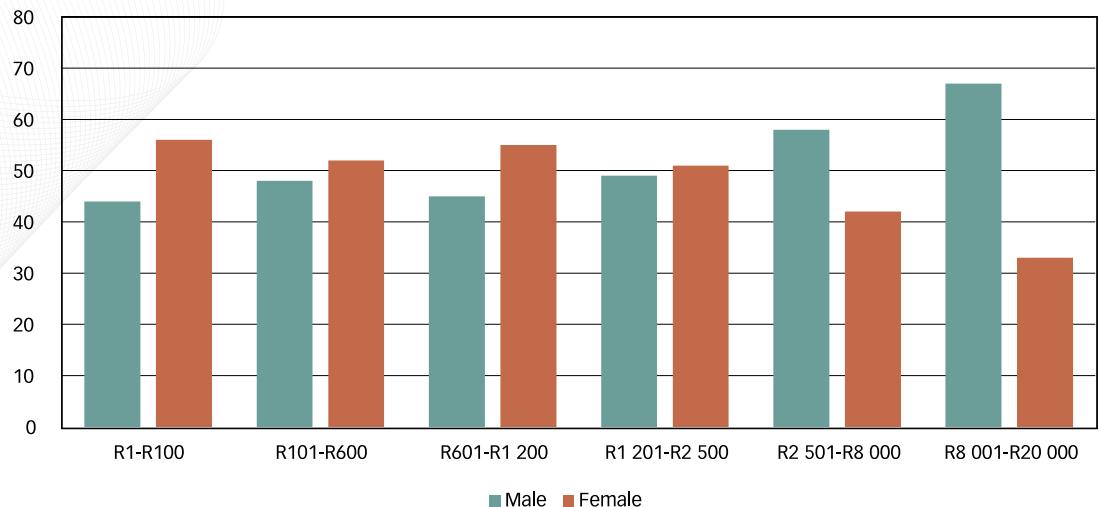
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⁵² As long as land is contested households remain unwilling to invest on housing. In the absence of land contestations, households with financial resources start to improve their housing conditions, as fears of eviction are eliminated.

⁵³ In view of their ages are not likely to be able to find full-time work again.

Figure 39 shows the split between female- and male-headed households per income group. Female-headed households represent the majority of the lowest income groups (i.e. below R2500 per month).

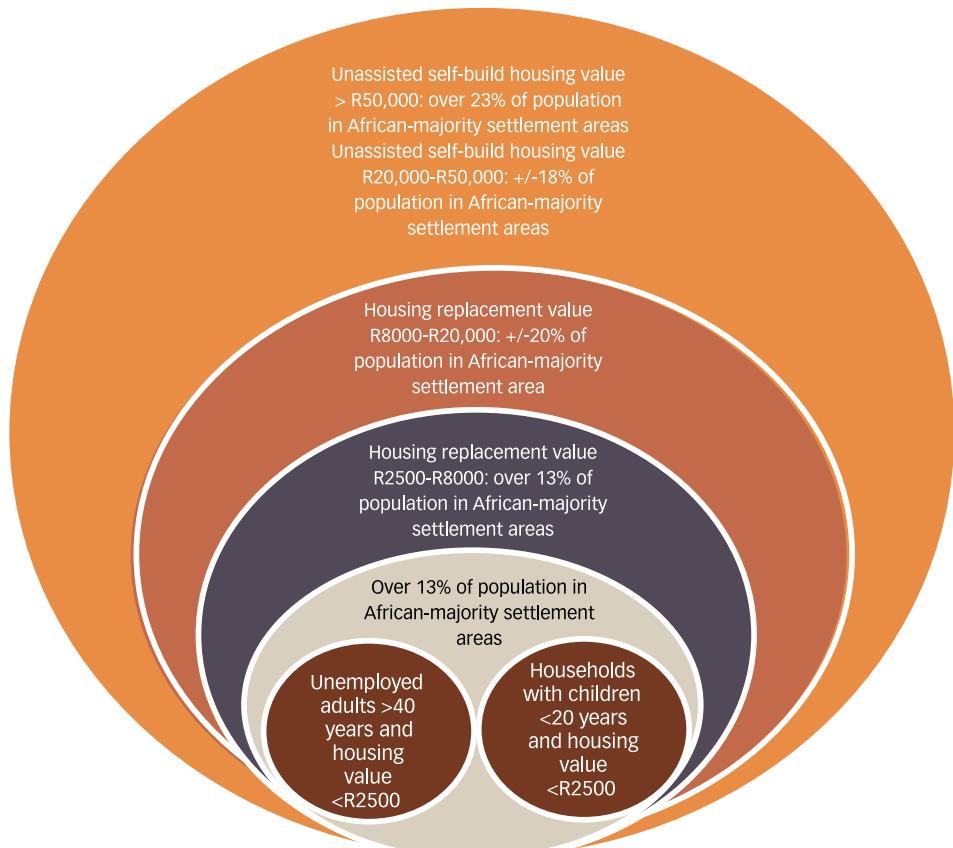
Figure 39: Female- and male-headed income groups (%)



Source: StepSA (2008)

Figure 40 divides the population into categories based on housing replacement value⁵⁴.

Figure 40: Estimates of replacement housing value and appropriate public support level



⁵⁴ Survey respondents were asked how much it would cost to build a similar house to theirs. These answers were used to calculate the housing replacement values used.

In Figure 40, the three innermost circles contains households with a housing replacement value of less than R2500, representing just over 13% of the population in African-majority settlement areas. (The total African-majority population consists of approximately 20 million people.) These households are the two most vulnerable groups, as identified above: households with children under the age of 20 years, mostly female-headed, and households whose members are all adults over the age of 40, who have been passed over by the labour market and are not normally eligible for social grants. At a minimum, providing subsidy housing to these most disadvantaged groups (estimated as 13%) would cost R120-billion, based on about 650 000 households and a cost of R180,000 per housing unit. These two groups are unlikely to be able to contribute towards attaining adequate housing needs, so they are entirely dependent on government's full housing provision.

The subsidy-eligible households most likely to succeed with self-build construction are those with housing replacement values of R2500–R8000 and R8000–R20,000. If households with a housing replacement value of up to R8000 were included in the subsidy net, this would mean a total of about 1.3 million households (or 27% of the population in African-majority settlement areas), which would increase costs to approximately R230-billion. The group in the replacement value category of R8000–R20,000 (representing over 20% of the population in African-majority settlement areas) live in relatively poor-quality housing but would, based on the experience of Swedenville and Block 18⁵⁵, be likely to have the resources and competences needed to build good-quality houses for themselves. Providing this group with a serviced site, in line with Outcome 8, would cost about R19-billion⁵⁶.

By encouraging and supporting self-build housing initiatives, the government could achieve remarkable progress in housing delivery. Government could assist households that can contribute towards meeting their housing needs by prioritising land registration and the provision of services and amenities. More resources could then be allocated to the two most vulnerable groups of households that cannot contribute at all towards their housing needs.

10.5 Conclusion

Insufficient attention has been given to understanding housing demand, which is multi-dimensional and includes housing type, location and tenure. This understanding will enable government, especially metropolitan municipalities, to plan adequately and provide for future housing needs. Using a housing model developed and applied in the City of Tshwane, the research found that demand for housing will be the greatest in urban areas (CBD and nodal points), where rental flats will be the most desired form of housing.

A study of self-build initiatives in Gauteng, Limpopo and Mpumalanga found that the key levers for self-build are land registration and the provision of basic infrastructure services. The population living in African-majority settlement areas were divided into categories based on the housing replacement value. The subsidy-eligible households most likely to succeed with self-build construction are those with housing replacement values of R2500–R8000 and R8000–R20,000. However, households with a housing replacement value of under R2500 will require subsidy housing from government. These are the most vulnerable groups and comprise female-headed households and households with adults over 40 years old who have no chance of finding employment and are not eligible for social grants.

If government encouraged households (that are able to contribute to their own housing needs) to participate in self-build housing initiatives, more resources would be available to provide government-subsidised housing for the two most vulnerable groups of households. In so doing, government could achieve remarkable progress in housing delivery.

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⁵⁵ These are some of the areas where surveys on self-built housing initiatives were undertaken.

⁵⁶ At an estimated cost of R33,000 per household, which includes R18,000 on average per site for acquiring the land on which these settlements are to be upgraded in situ, R10,000 for bulk services and R5,000 for electricity supply.

10.6 Recommendations

With respect to housing demand and self-build housing initiatives, the Commission recommends that:

1. Municipalities, especially metros, invest in forward-looking processes and systems that will enable them to understand and disaggregate housing demand accurately.
2. Metros focus on planning for rental flats and creating new (or transforming existing) neighbourhoods in intermediate suburbs, which have lower densities than the inner city.
3. Government's housing subsidy prioritises the most vulnerable groups, which include poor female-headed households with children below the age of 20 years and households containing adults who are permanently out of the labour market.
 - a. Targets and indicators should be put in place and closely monitored annually.
 - b. The national Department of Human Settlements should report on households benefitting from government housing programmes based on gender and by age group on a yearly basis.
4. Municipalities prioritise land ownership registration processes where informal settlements are located in the developable areas.
5. Government prioritises the provision of infrastructure in areas with the potential for self-build housing.

PART 4

Demarcations and Beyond

Discussions about resource allocation typically focus on financial transfers that attempt to allocate resources equitably across spheres of government to realise long-term development goals. An often-ignored issue is the effect that changing municipal boundaries (re-demarcation) has on resource allocation. Amalgamating or merging municipalities has benefits and disadvantages. It creates municipalities that are large enough to be technically and financially capable of providing a variety of goods and services. Benefits include abundant cost savings, increased tax bases, improved financial viability and more sustainable municipalities. This is because large municipalities are believed to reduce municipal bureaucracy and associated inefficiencies, reap economies of scale by reducing duplication and overlap in service delivery, and reduce the costs associated with spill-overs of services across jurisdictions. The disadvantages of large municipalities include poor accountability and coordination of service delivery, and local voices not being adequately heard.

The Commission believes that no single indicator can capture all aspects required for successful demarcation. Debates will continue about the impact of demarcations on municipal financial performance and sustainability – and independently produced statistics support such discussions. However, discussions and decisions on future demarcation should not be confined to fiscal indications. The analysis in Chapter 11 suggests that demarcation processes are costly, can be disruptive and distract from a municipality's core business. The case studies examined and the subsequent econometric models indicate that the demarcation process actually results in unintended economic consequences, with significant transaction costs (especially during the transitional phase) and a negative effect on own revenues.

CHAPTER II

The Impact of Demarcations on Municipal Finances

11.1 Introduction

Since the end of the apartheid era, the number of local government structures have declined, a trend that is expected to continue. In 1995/96, 1262 local government structures were amalgamated⁵⁷ into 843 local authorities (or municipalities). With the establishment of the Municipal Demarcation Board (MDB)⁵⁸ in 1999, the number of municipalities were rationalised to 284 in preparation for the 2000 local government elections. The number was further reduced to 283, before the 2006 local elections, and then to 278 ahead of the 2011 local elections. The current 278 local government structures consist of eight metropolitan municipalities, 44 district municipalities and 226 local municipalities. The number of municipalities is expected to decline further prior to the local government elections in 2016, as new demarcations come into effect.

Concerns have been raised about the impact of demarcation (i.e. reconfiguring the size, number and type of municipalities) on municipal financial and fiscal performance. The criteria used by the MDB to determine municipal boundaries have been questioned and even condemned for contributing to the establishment of financially unviable and unsustainable municipalities. At its 53rd national conference in 2013, the African National Congress (ANC) expressed its concern and resolved that "The MDB should take into account the financial implications of its re-demarcation of municipalities; the challenge of unviable municipalities; the need for ward boundaries to break down racial barriers and a reduced frequency of re-demarcations" (ANC, 2013).

Many factors affect municipal fiscal performance, including the lack of a tax base due to poverty and unemployment; backlogs; poor revenue systems and collection; service and payment boycotts; poor budget planning; unfunded mandates; corruption, skill, knowledge and experience deficits among staff; and the lack of timely interventions by provincial and central government. The impact of demarcations on the fiscal performance of municipalities needs to be evaluated, to establish the consequence of boundary changes on fiscal variables such as revenues, expenditures, tax bases and liabilities. Municipal demarcations should ideally result in financially sustainable municipalities, but many municipalities lack a sound revenue base to sustain their activities. The purpose of this chapter is to evaluate the impact of demarcations on the fiscal performance of municipalities. After explaining the methodology used, the findings from the case studies and econometric estimations are discussed. Then, alternatives to mergers and pre-conditions for mergers are presented, followed by concluding remarks and recommendations.

11.2 Methodology

Case studies (local and international) and econometric modelling techniques are used to assess the impact of boundary changes on the financial and fiscal performance of municipalities.

Five local municipalities (the City of Tshwane, Mtubatuba local municipality, Matatiele local municipality, Bushbuckridge municipality) and two Canadian municipalities (Halifax Regional Municipality and Toronto City) were selected as case studies. The performance of the six municipalities was evaluated using various financial and fiscal indicators, including changes in expenditures, revenues, tax base and debt, both before and after the boundaries were changed. In addition, officials from the selected municipalities were interviewed, data from city budgets were obtained and desktop studies were undertaken.

Econometric models were used to determine the impact of boundary changes on fiscal outcomes (representing financial performance) using changes in bulk costs and revenues as proxies. A dummy variable was included to capture the demarcation process. These econometric models were based on a balanced panel dataset spanning the period 2004/5–2011/12. Panel data models can be estimated via fixed effects or random effects models. Both the fixed and random effects models were run and, on the basis of the Hausman test⁵⁹ which preferred the fixed effects model over the random effects model, the ensuing analysis and interpretation was based on the fixed effects model.

⁵⁷ Amalgamate (or amalgamation) is used interchangeably with merge (or merger) in this chapter, referring to the reorganisation of municipalities that involved redrawing boundaries and combining parts of or entire municipalities.

⁵⁸ The mandate of the MDB is provided for in the Constitution (Section 155 and 157), the Municipal Demarcation Act (1998), and the Municipal Structures Act (Schedule 1 and Section 85) (1998). The Constitution mandates an independent authority (the MDB) to determine municipal boundaries and to delimit wards.

⁵⁹ Hausman test: $\chi^2(4)=175.01$, Prob: $\chi^2=0.0000$

The fixed effects model estimated is of the following form:

$$Exp_{it} = X_{it} \beta_i + Z + \alpha_i + \mu_{it} \quad (1)$$

Where

α_i is the unknown intercept for each municipality

Exp_{it} is the dependent variable and i and t are municipality and time dimensions

X_{it} is a vector of independent control variables that include population density, unemployment rate, and a municipality's gross value addition.

Z is the demarcation process dummy

β_i is the coefficient to be estimated, and

μ_{it} is the error term

The data used was sourced from Global Insight, National Treasury and StatsSA data bases.

11.3 Findings from the Case Studies

11.3.1 City of Tshwane

The City of Tshwane is a category A municipality established in December 2000 following the merger of various municipalities and councils. In May 2008, the Minister of Provincial and Local Government proclaimed the incorporation of Metswedeng district municipality and two local municipalities (Nokengtsa Taemane and Kungwini) into the City of Tshwane boundaries. This was in line with the Gauteng global region strategy to reduce the number of municipalities in the Gauteng province. The merger came into effect in May 2011. The reason for incorporating the two smaller municipalities into the larger metropolitan area was to speed up service delivery and to enable communities from smaller municipalities to benefit from the bigger municipality's good infrastructure and skills needed to run projects efficiently (City of Tshwane, 2011). The 2011 re-determination of the boundaries led to the city population increasing from nearly two and a half million (2 470 694) people in 2010/11 to nearly three million (2 916 785) people. The land area increased to 6368 km², which resulted in a drop in population density, from 908 persons/km² to 464 persons/km².

The merger had far-reaching fiscal implications. The transitional costs⁶⁰ were estimated at R1.04-billion, but the Gauteng Department of Local Government and Traditional Affairs provided the City of Tshwane with a once-off grant of only R20-million. The more than R1-billion difference between the costs and the grant allocation remains a sore point for the new municipality.

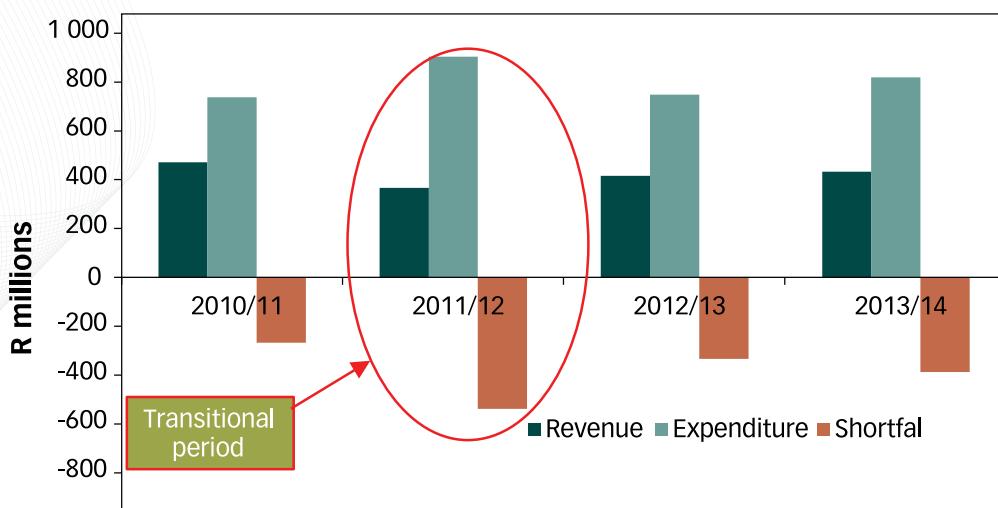
The disruptive effect of the merger can be seen in the expenditure and revenue figures for the City of Tshwane. During the first post-merger year (2011/12), expenditures in the incorporated municipalities shot up, although most of these expenditures were not budgeted for, while revenues from the incorporated municipalities declined. The three municipalities did not contribute to an increase in the city's tax base, as the inherited municipalities were relatively poor and had high indigent populations. As a result, the city found itself with a huge deficit (See figure 41 on page 136).

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⁶⁰ The reader should note that these figures are from the Tshwane municipality and have not been independently verified.

Figure 41: Revenue and expenditure in the incorporated municipalities

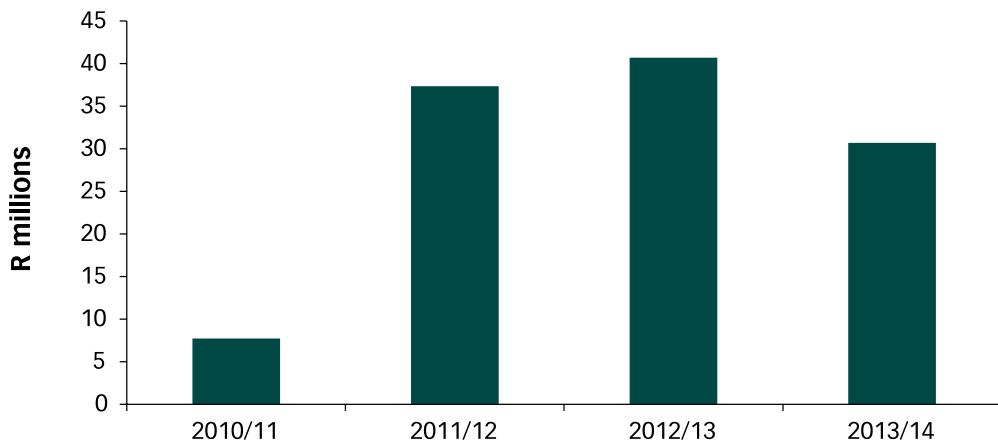
Source: Tshwane
Budget Office



The trend in capital expenditures in the incorporated municipalities tells a similar story (Figure 42). The five-fold increase in capital expenditure can be attributed to efforts to align the different service delivery systems.

Figure 42: Capital expenditure in the incorporated municipalities

Source: Tshwane
Budget Office



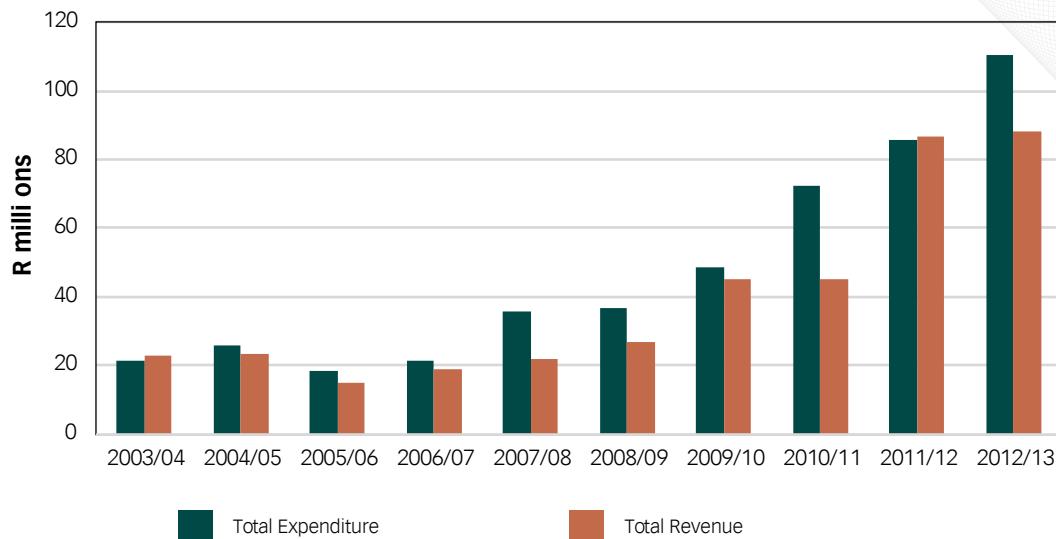
The City of Tshwane also inherited huge debts from the incorporated municipalities. This debt was in part the result of long-term contracts and contractual commitments made prior to the merger. The standardisation of the IT and billing systems also came at a cost.

11.3.2 Mtubatuba Municipality

Located in the KwaZulu-Natal Province, Mtubatuba municipality's boundaries were extended in 2011 to include a portion of Mpukunyoni Traditional Council, increasing the municipality's total geographical area to 1970 km². As a result, the municipality's population more than tripled (from 44 953 people in 2010/11 to 160 637 people in 2011/12). The boundary changes resulted in some significant expenditure changes.

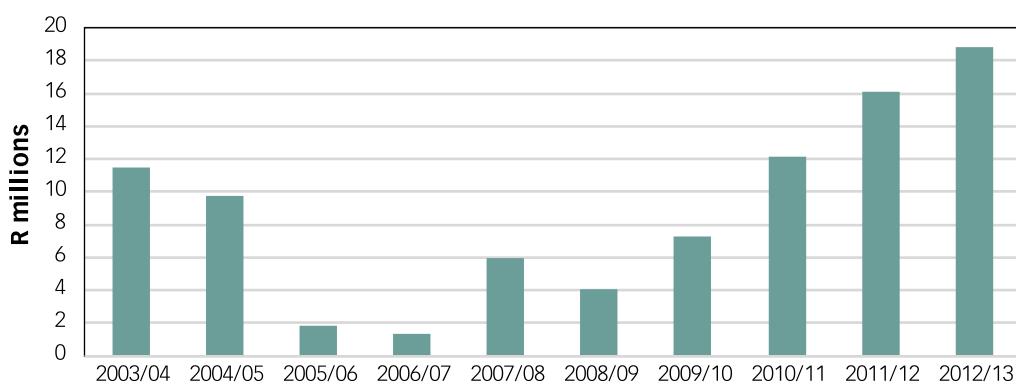
As Figure 43 shows, total expenditures for the Mtubatuba municipality increased by about 18%, from R72-million to R85-million, just one year after re-determination. The increase in total expenditures was in part because of increased capital expenditures (Figure 44), as the municipality had to extend infrastructure provision to the incorporated areas, especially Mpukunyoni which had huge backlogs. Surprisingly, municipal revenues rose alongside the expenditures. However, this was the result of increased government transfers. Own revenues were stagnant during the period, indicating that the demarcation process did not improve the municipality's revenue base.

Figure 43: Total expenditure and revenue before and after incorporation



Source: National Treasury (2008) and National Treasury (2011) (NB: 2011/12 and 2012/13 are medium term estimates)

Figure 44: Capital expenditure before and after incorporation



Source: National Treasury (2008) and National Treasury (2011) (NB: 2011/12 and 2012/13 are medium term estimates)

11.3.3 Matatiele Municipality

In 2006, the Matatiele municipality was moved from the Sisonke district municipality in KwaZulu-Natal and incorporated into the Alfred Nzo district municipality in the Eastern Cape. The re-demarcated Matatiele local municipality included the towns of Matatiele, Cedarville and the magisterial district of Maluti (which formerly fell under the Umzimvubu municipality) and a rural district management area (which formerly fell under the jurisdiction of the Alfred Nzo district municipality). Prior to 2006, the municipality had a population of just under half a million (597 211), which increased after demarcation by approximately 11%, to 663 271 in 2007/08. The geographic area covered by the municipality increased almost five-fold, from 956 km² to 4352 km². The municipality was forced to establish 24 new wards (IHS Global Insight database), and the large increase in geographic area and population meant additional administrative costs.

Compared to the other case studies, a different story emerges from the Matatiele municipality's financial indicators. The municipality had been running a deficit on its budget prior to the demarcation and surplus after the demarcation in 2006 (Figure 45). A key factor explaining the surplus after 2006 was the limited capacity to spend, especially on capital expenditure. Total expenditures jumped from R41-million in 2005/6 to R83-million in 2006/7, driven mainly by increased personnel expenditure, as more people were hired to service the newly incorporated areas - the number of municipal employees grew by more than 100%. The capital expenditure trends presented on Figure 46 show a huge leap, from R7.4 million in 2005/06 (before demarcation) to R26.6 million in 2006/07 (after demarcation).

Figure 45: Total expenditure and total revenue before and after incorporation

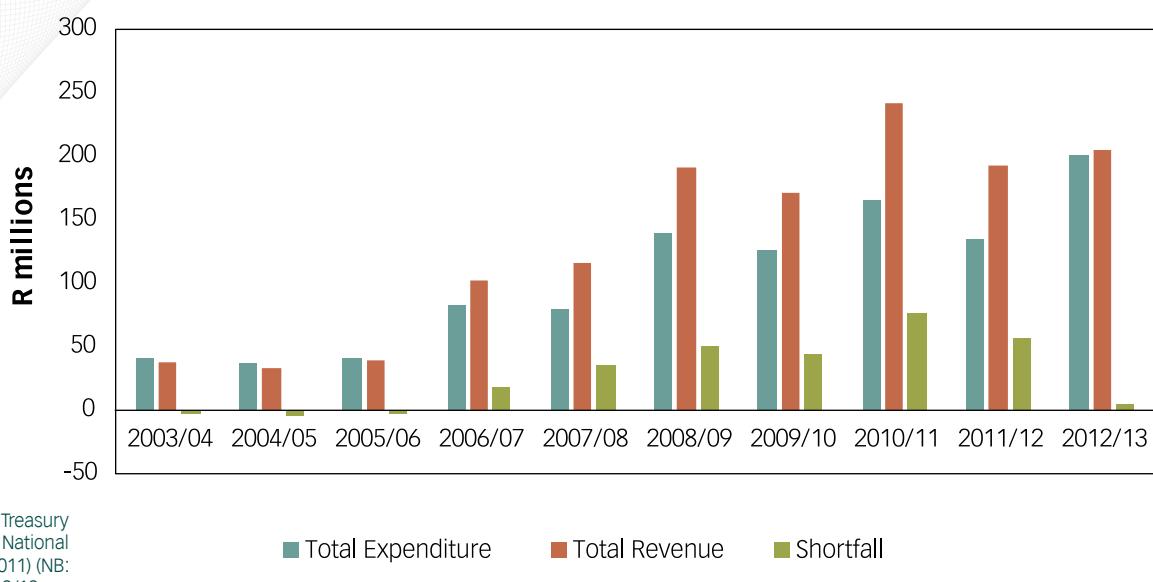
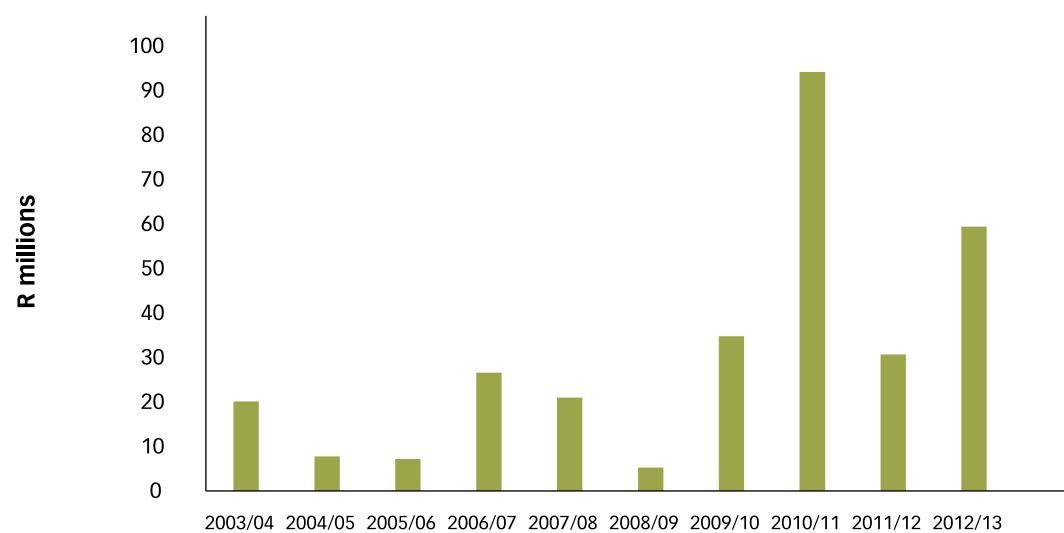


Figure 46: Capital expenditure before and after incorporation

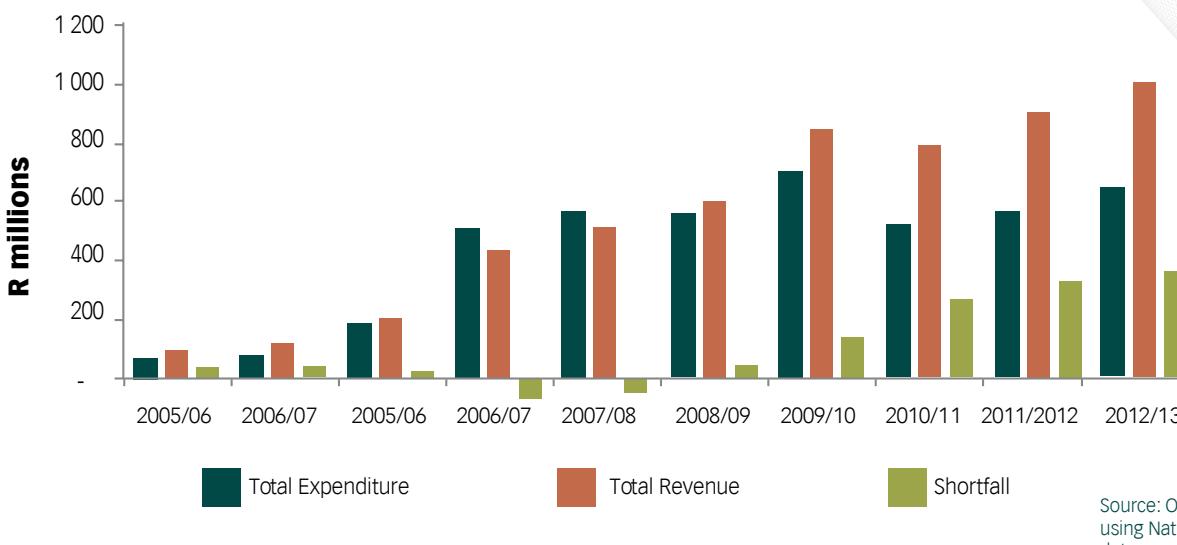


11.3.4 Bushbuckridge Local Municipality

Bushbuckridge local municipality is a category B municipality whose boundaries were changed in 2006. After the disestablishment of the Bohlabela district municipality, the Bushbuckridge local municipality was incorporated into Ehlanzeni municipality and received water and sanitation authority and service delivery functions. However, the demarcation did not result in any significant changes to the municipality's tax base.

The transition led to considerable disruptions of service delivery, as shown by the expenditure in Figure 47. Before the demarcation (2003/04–2005/06), the municipality had been under-spending but, in the year of the demarcation and the following year, over-spent by 15% and 9% respectively.

Figure 47: Total expenditure and revenue before and after demarcation



Source: Own computation using National Treasury data.

11.3.5 International Case Studies

Two Canadian cities, Toronto City and Halifax Regional Municipality (HRM), underwent restructuring in 1996. Metropolitan Toronto – East York, Etobicoke, North York, Scarborough, York, and the former city of Toronto – and the regional municipality of Metro Toronto were dissolved and amalgamated into a single municipality called the City of Toronto. In Halifax, four municipalities – Halifax, Dartmouth, Bedford and Halifax Country were amalgamated into the HRM.

The purpose of both amalgamations was to improve efficiencies and save costs. For example, Toronto City expected to save \$645-million by eliminating service delivery duplications but in fact only managed to save \$135-million in the first year after amalgamation. The standardisation of salaries, systems and services contributed to higher costs than expected. In HRM, cost savings were wiped out by salaries that were pegged at the level of the highest-paid employee in the original municipalities (Vojnovic, 2000). Employee costs, together with the cost of acquiring new accounting and information systems, contributed to the \$25-million transition cost of the HRM merger. These higher employee costs also contributed to higher operating costs. Similarly, in Toronto City, the standardisation of wages and salaries came at a cost of \$2-million and contributed to the higher-than-expected total transition cost, which was \$55-million more than the original estimate of \$220-million.

Before amalgamation (1990–1996), the merged municipalities (with the exception of Toronto Metro) recorded an operating budget of less than \$2-billion. After the amalgamation, the total operating expenditure for the City of Toronto increased by 22% between 1997 and 1998 and continued to increase by just under 10% in the years that followed. The amalgamation had no significant impact on capital expenditure, which increased by only 3% between 1997 and 2007.

11.4 Econometric Results

As has been noted above, two models were estimated: the bulk cost and own revenue models. Bulk costs are the bulk purchases municipalities make in order to deliver services to households and businesses, mainly electricity and water. Bulk costs are used as a proxy (as a stand in) for the cost of providing basic services. Own revenue is the money that the city generates itself through taxes and services charges, which is used for running the city's operations.

Bulk costs

The results suggest that a 1% increase in economic growth will yield a 0.4% increase in bulk costs. As expected, the cost of providing bulk services increases when the population grows. When the demarcation variable is introduced into the model, bulk costs increase, suggesting that demarcations could threaten the sustainable development of municipalities, by increasing the costs of servicing communities. This result confirms the cases studies, which showed that demarcations tend to disrupt municipal costs.

Own revenue

Municipal economic growth was found to be positively related to own revenues, i.e. a 1% increase in economic growth of a municipality yields a 0.1% increase in own revenues. This result is not surprising, as an expanding economy leads to more revenues being generated and better payment levels. Population growth was found to be negatively (but statistically insignificant) related to own revenues. This is because most mergers involve the incorporation of poorer communities, which will not contribute much to own revenues but will benefit from the existing budget. As expected, unemployment and poverty affect own revenue negatively: when the unemployment rate increases, own revenue decreases; if poverty at municipal level increases by 1%, own revenue decreases by 0.3%. When the demarcation variable is introduced, the effect on own revenue is negative, suggesting that the demarcation process does not result in improved revenues for the amalgamated municipalities. A possible explanation is that poorer municipalities are often incorporated, which means that indigent populations increase but without any additional revenues being generated. Therefore, it is a myth that demarcations result in enhanced revenue bases. This implies that additional revenues should be provided to newly amalgamated municipalities to supplement own revenues, at least in the transition phase.

11.5 Alternatives to Mergers and Pre-Conditions for Mergers

The benefits of municipal mergers, which include economies of scale, efficiency gains and improvement in fiscal outcomes, often do not appear immediately after the mergers (Hansen, Kurt and Pedersen, 2014). As illustrated by the case studies and econometric evidence, the merger is often accompanied by high transitional costs, which may destabilise service delivery. Given these transitional costs, it may be necessary to consider alternative mechanisms that are less costly but yield similar fiscal and service delivery outcomes. Municipalities need to be allowed to explore other options, especially when the aim is to improve fiscal and service delivery outcomes. Other viable municipal restructuring options worth exploring include voluntary cooperation among municipalities, inter-municipal service delivery agreements and special purpose vehicles to address particular needs of concerned municipalities.

- Voluntary cooperation can be used to provide services across the region without resorting to a merger. It recognises the interrelationships that exist among municipalities but, at the same time, guarantees municipal autonomy for expenditure, tax decisions or economies of scale.
- Inter-municipal service delivery agreements address the problems of externalities associated with service provision by delivering certain services (e.g. sewerage) jointly. Structures established through these agreements are also easy to disband.
- Special purpose vehicles can be used to manage regional services that are characterised by spill-overs or provide certain services for several municipalities.

Developing pre-conditions can also improve the effectiveness of mergers. The Municipal Demarcation Act (Section 24 and 25) and the Municipal Structures Act set out clearly the objectives and criteria of the demarcation process. In addition, the Municipal Demarcation Act defines the factors and principles that the minister for local government and the Municipal Demarcation Board must take into account when deciding non a particular boundary change. Section 25(c) states that the Board must take into account “the financial viability and administrative capacity of the municipality to perform municipal functions efficiently and effectively”. The guiding principle for the MDB is “the need to ensure that all municipalities are financially viable and have administrative capacity”. Although many factors must be considered and prioritisation can be difficult, particular attention needs to be paid to the financial and fiscal implications of demarcation, which can affect the financial viability of demarcated municipalities. The following should be pre-conditions for any mergers:

- *Establish financial and fiscal implications of boundary changes.* Before announcing the decision to change boundaries, the financial and fiscal implications of boundary changes should be established and made publicly available. A due diligence exercise should be undertaken, to isolate potential risks and single out important issues and dynamics. A due diligence should, among other things, establish
 - the financial situation of the affected municipalities
 - the number and remuneration of workers in the affected municipalities
 - the value and condition of assets
 - the debtors and creditors of the affected municipalities
 - the existing contracts and other legal proceedings for all merging municipalities

The costs of a merger should ideally consist of transitional costs attributable only to a merger (both direct and indirect costs). Before taking a final decision to amalgamate, indicative costs or issues should be established (as per Table 30, on page 142).

- *Adequate funding of demarcation.* Before finalising the demarcation decision, a demarcation funding stream should be identified. If the demarcation is a vertical decision (i.e. made by provincial and national government), then the transitional costs should be borne by the national/provincial government, not by the municipalities. Such costs fall outside the municipal budget and have the potential to harm the overall development of the municipality concerned. Ideally, transitional costs that result from a vertical decision should be funded through the transfer system – the most appropriate funding instrument is a transitional grant.

Table 31: Financial and fiscal costs associated with demarcation

Cost		Itemised Costs
Direct Costs	Financial Costs	<ul style="list-style-type: none"> • Infrastructure Costs • Administrative Costs • Human Resources Costs • Debt • Revenues and Expenditures • Tariffs
Fiscal Costs		<ul style="list-style-type: none"> • Integrating and consolidating programmes • Upgrading of data services • Repair and maintenance • Eliminating backlogs • Rationalisation of services • Change management costs • Acquisition of new technology for human resources, financial and payroll systems • Harmonisation of systems • Rationalisation of administrative policies • Rationalisation of fees and tax rates • Harmonisation of asset registers • Rationalisation of voters roll • Merger management, coordination and communication costs • Harmonisation of wages, salaries and allowance (wages are often set at the highest level paid by separate municipalities) • Harmonisation of human resources policies • Harmonisation of councillor allowances • Costs associated with retraining and retooling of workers • Costs associated with staff redeployment • Retrenchment or staff layoff costs • Debt servicing costs • Liabilities • Irrecoverable consumer debt • Increase in expenditures due to wage and services rationalisation • Tariffs may increase for some consumers in previously low tariff municipalities
Indirect Costs		<ul style="list-style-type: none"> • Perverse Incentives • Competition

11.6 Conclusion

Demarcation involves redrawing municipal boundaries, and reconfiguring the size, number and type of municipalities. Since 1995/96, the number of municipalities have declined, from 1262 to 278 in 2011, a number that is expected to decline further prior to the local government elections in 2016, as new demarcations come into effect. Concerns have been raised about the impact of demarcation on municipal revenues, expenditures, tax bases, and liabilities. The impact of boundary changes on the financial and fiscal performance of municipalities was assessed using local and international case studies, as well as econometric modelling techniques.

Demarcation processes are costly, can be disruptive and detract from a municipality's core business. The case studies and the econometric models indicate that the demarcation process actually results in unintended economic consequences and significant transaction costs, especially during the transitional phase. Own revenues are also negatively affected by demarcations. Furthermore, demarcation processes have implications for human resources and other municipal processes. Human resources are sometimes shifted from one municipality to another. Other negative consequences (especially in the transition period) may result from issues related to the supply chain, long-term contracts, municipal plans and policies, financial and other systems, information and databases, asset registers and asset maintenance, and repairs. Disruptions in the billing systems are not uncommon, affecting revenues negatively. Redefining boundaries complicates future projections and budgeting, as such processes rely on historical trends and data. To minimise the negative effects of mergers, role-players need to compare the costs of a merger with the costs of alternative reforms. In addition to considering other reforms, before mergers take place, certain conditions should be met.

11.7 Recommendations

With respect to impact of demarcations on the financial performance and sustainability of municipalities, the Commission recommends that:

1. The financial and fiscal implications of boundary re-determinations are prioritised and established before any demarcation decision is pronounced. A funding stream for the demarcation process should be identified before the process takes effect. In order to avoid the negative effects of demarcations on municipalities and their populations, economic considerations (i.e. both fiscal and financial) should be at the core of any demarcation decision, both in theory and in practice. The current criteria are clear that economic considerations should be part of the criteria, but this does not appear to be the case in practice.
2. For every vertically decided demarcation process, government bears the transitional costs of the restructuring. A transitional demarcation grant should be awarded to the amalgamated municipality. This grant should be temporary and be awarded over at least three years (at least a year before, the year of and the year after demarcation takes place). The purpose of the grant will be to facilitate the restructuring process. This includes the following:
 - a. Planning and preparing an amalgamated municipality's delivery model, e.g. combining the delivery models of individual municipalities.
 - b. Rationalising and harmonising policy regimes, IDPs and bylaws of different municipalities.
 - c. Rationalising tariffs.
 - d. Rationalising employment policies and other human resources systems (grading of workers and job evaluation processes).
 - e. Rationalising and harmonising evaluation rolls and assert registers.
 - f. Building capacity to deal with change management.
 - g. Facilitating communication about the demarcation.

REFERENCES

References for Chapter 1

- Agenor, P and Montiel, PJ. 2008. *Development Macroeconomics*. 3rd ed. Princeton: Princeton University Press.
- ANC (African National Congress). 1994. *The Reconstruction and Development Programme*. Johannesburg: ANC.
- Calitz, E. 2000. Fiscal implications of the economic globalisation of South Africa. *The South African Journal of Economics*, Dec 2000, Vol 68:4.
- Calitz, E, Du Plessis, S and Siebrits, K. 2013. Fiscal sustainability in South Africa: Will history repeat itself? *Stellenbosch Economic Working Papers Series 07*.
- Leibbrandt, M, Levinsohn, JA, McCrary, J. 2005. Incomes in South Africa since the fall of Apartheid. *National Bureau of Economic Research (NBER) Working Paper No. 11384*.
- Leibbrandt, M, Woolard, I, Finn, A, Argent, J. 2010. Trends in South African income distribution and poverty since the fall of Apartheid. *OECD Social, Employment and Migration Working Papers 101*. Paris: OECD Publishing.
- NPC (National Planning Commission). 2011. *National Development Plan 2030: our future – make it work*. Pretoria: NPC.
- Ozler, B. 2007. Not separate, not equal: poverty and inequality in post-apartheid South Africa. *Economic Development and Cultural Change*, 55(3): 487–529.
- StatsSA (Statistics South Africa). 2002. Earning and spending in South Africa. Selected findings and comparisons from the income and expenditure surveys of October 1995 and October 2000. Pretoria: StatsSA.

References for Chapter 2

- Barro, RJ. 1974. Are government bonds net wealth? *Journal of Political Economy*. Vol.82: 1095–1117.
- Barro, RJ. 1997. Optimal management of indexed and nominal debt. *National Bureau of Economic Research (NBER) Working Paper*, No. 6197.
- Bernheim, D. 1989. A neoclassical perspective on budget deficits. *Journal of Economic Perspectives*, Vol. 3, No.2: 55–72.
- Blanchard, O and Perotti, R. 1999. An empirical characterisation of the dynamic effects of changes in government spending and taxes on output. *NBER Working Paper*, series 7269.
- Buiter, WH. 1993. Public debt in the USA: how much, how bad, and who pays? *NBER Working Paper*, No. 4362.
- Buiter, WH and Rahbari, E. 2012. Debt, financial crisis and economic growth. Keynote address at *South African Reserve Bank Conference on Monetary Policy and the Challenge of Economic Growth*. Pretoria.
- Diamond, PA. 1965. National debt in a neoclassical growth model. *The American Economic Review*, Vol.55, No.5: 1126–50.
- Reinhart, C and Belen Sbrancia, M. 2011. The liquidation of government debt. *NBER Working Paper* No. 16893. [Online]. Available: <http://www.imf.org/external/np/seminars/eng/2011/res2/pdf/crbs.pdf>.
- SARB (South African Reserve Bank). 2013. *Quarterly bulletin September 2013*. Pretoria: SARB.
- Tett, G. 2011. Policymakers learn a new and alarming catchphrase. *Financial Times*, 9 May 2011.
- Turner, P. 2002. Bond markets in emerging economies: an overview of policy issues. *Bank for International Settlements*, No. 11.
- Wilcox, D. 1989. The sustainability of government deficits: implications of the present-value borrowing constrain. *Journal of Money, Credit and Banking*, 21(3): 291–306.

References for Chapter 3

- Agüero, JM, Carter, MR. and Woolard, I. 2007. The impact of unconditional cash transfers on nutrition: the South African child support grant. *International Poverty Centre (IPC) Working Paper 39*.
- Bertrand, M, Mullainathan, S and Miller, D. 2003. Public Policy and Extended Families: Evidence from Pensions in South Africa. *World Bank Economic Review*, Vol. 17(1):27–50.
- Boysen, F. 2004. Social grants as safety net for HIV/AIDS-affected households in South Africa. *Journal of Social Aspects of HIV/AIDS* 1(1): 45–56.
- Budlender, D and Woolard, I. 2006. The impact of the South African child support and old age grants on children's schooling and work. *TECL Paper* No. 43. Geneva: International Labour Office.
- Case, A, Hosegood, V and Lundi, L. 2005. The reach and impact of child support grants: evidence from KwaZulu-Natal. *Development Southern Africa* Vol 22 No. 4, pp. 467–482.

- CASE (Community Agency for Social Enquiry). 2008. Review of the child support grant: uses, implementation and obstacles. Report compiled for the *Department of Social Development (DSD), the South African Social Security Agency (SASSA) and the United Nations Children's Fund (UNICEF)*. Johannesburg.
- Devereux, S. 2002. Can social safety nets reduce chronic poverty? *Development Policy Review* 20(5): 657–675.
- DSD (Department of Social Development), SASSA (South African Social Security Agency) and Unicef (United Nations Children's Fund). 2012. The South African child support grant impact assessment: evidence from a survey of children, adolescents and their households. Pretoria: UNICEF South Africa.
- DFID (Department for International Development). 2011. Cash Transfers Literature Review. London: DFID, Policy Division.
- Eyal, K and Woolard, I. 2011. Throwing the book at the CSG. *A Southern Africa Labour and Development Research Unit Working Paper* 53. Cape Town: SALDRU, University of Cape Town.
- Foster, J, Greer, J and Thorbecke, E. 1984. A class of decomposable poverty measures, *Econometrica*, 52, 761–766.
- Haarmann, C. 2000. Social assistance in South Africa: Its potential impact on poverty. PhD Thesis, Development Studies at the Institute for Social Development, University of the Western Cape.
- Johannsmeier, C. 2007. The social and economic effects of the disability grant for people with disabilities and their households – A qualitative study in KwaZulu-Natal province. *Research Report No. 74*. Durban: University of KwaZulu-Natal (School of Development Studies).
- Leibbrandt, M, Woolard, I, Finn, A and Argent, J. 2010. Trends in South African income distribution and poverty since the fall of Apartheid. *OECD Social, Employment and Migration Working Papers No 101*. Paris: OECD Publishing.
- National Treasury. 2010. *Budget review*. [Online]. Available: <http://www.treasury.gov.za/documents/national%20budget/default.aspx>
- National Treasury. 2013. *Budget review*. [Online]. Available: <http://www.treasury.gov.za/documents/national%20budget/default.aspx>
- Noble, M, Ntshongwana, P and Surender, R. 2008. *Attitudes to Work and Social Security in South Africa*. Pretoria: Human Sciences Research Council.
- Posel, D, Fairburn, JA, and Lund, F. 2006. Labour migration and households: are consideration of the effects of the social pension on labour supply in South Africa. *Economic Modelling*, 23(5): 836–53.
- Samson, M, Lee, U, Ndlebe, A, MacQuene, K, van Niekerk, I, Gandhi, V, Harigaya, T and Abrahams, C. 2004. The social and economic impact of South Africa's social security system. *Report Commissioned by the Economics and Finance Directorate of the DSD*. Cape Town: Economic Policy Research Institute.
- SPII (Studies in Poverty and Inequality Institute). 2012. Social justice and transformation: building up knowledge to break poverty. [Online]. Available: <http://spi.org.za/wp-content/uploads/2013/11/spii-annual-report-2012.pdf>
- Theil, H. 1967. *Economics and Information Theory*. Amsterdam: North Holland.
- Van der Berg, S and Siebirts, FK. 2010. Social assistance reform during a period of fiscal distress. *Paper prepared for the FFC (Financial and Fiscal Commission)*. Midrand: FFC.
- Williams, MJ. 2007. The social and economic impacts of South Africa's child support grant. *EPRI Working Paper No. 39*. Cape Town: Economic Policy Research Institute.
- Woolard, I, Hartgen, K, Klasen S. 2010. The evolution and impact of social security in South Africa. *Paper prepared for the Conference on Promoting Resilience through Social Protection in Sub-Saharan Africa, organised by the European Report of Development in Dakar, Senegal, 28–30 June, 2010*.
- Yamauchi, F. 2005. Early childhood nutrition, schooling and within-sibling inequality in a dynamic context: evidence from South Africa. *FCND Discussion Paper No. 203*. Washington, DC: International Food Policy Research Institute (Food Consumption and Nutrition Division).

References for Chapter 4

- Blecher, M. 2008. Concept note on health component of the provincial equitable share. Pretoria: National Treasury.
- Branham, D. 2004. The wise man builds his house upon the rock. The effects of school building infrastructure on student attendance. *Social Science Quarterly Vol; 85 No 5*.
- Burger, R. 2006. How pro poor is the South African health system? *Stellenbosch Economic Working Papers: 06/07*. Stellenbosch: University of Stellenbosch

- Crouch, L and Mabogoane, T. 1998. When the residuals matter more than the coefficients: an educational perspective. *Studies in Economics and Econometrics*, vol. 22, no. 2:1–14.
- Cuyvers, K. 2011. Wellbeing at school: does infrastructure matter? Paris: OECD Publishing.
- DBE (Department of Basic Education). 2011. *Action plan to 2014: towards the realisation of schooling 2025*. Pretoria: DBE.
- DBE. 2013. *Government Gazette*. Pretoria: DBE.
- Equal Education. 2009. Comment on regulations relating to the prohibition of the payment of unauthorised remuneration and the giving of financial benefit or benefit in kind to certain state employees. Khayelitsha, Cape Town: Equal Education.
- Fiske, EB and Ladd, HF. 2004. *Education Reform in Post-Apartheid South Africa*. Washington: Brookings Institute Press.
- Giese, S, Zide, H, Koch, R, Hall, K. 2009. A study on the implementation and impact of the no-fee and exemption policies. Cape Town: Alliance for Children's Entitlement to Social Security.
- McIntyre, D. 2012. What progress has been made towards the equitable allocation of health care resources in South Africa? Health Economics Unit, School of Public Health and Family Medicine, University of Cape Town.
- Murillo, F. 2011. School infrastructure and resources do matter: analysis of the incidence of school resources on the performance of Latin American students. *School Effectiveness and School Improvement*, vol. 22, no 1:29–50.
- National Treasury. 2013. *Budget review*. Pretoria: National Treasury.
- Ndhlovu, RSM. 2012. *The Implications of the National Norms and Standards for School Funding in Equity in Public Schools in the Tshwane West District*. Johannesburg: University of Johannesburg.
- NPC (National Planning Commission). 2011. National Development Plan 2030: our future – make it work. Pretoria: NPC.
- OECD (Organisation for Economic Co-operation and Development). 2011. Does participation in pre-primary education translate into better learning outcomes, PISA in Focus. Paris: OECD Publishing.
- SACMEQ (Southern and Eastern Consortium for Monitoring Education Quality). 2011. Trends in Achievement levels for Grade 6 Pupils in South Africa. [Online]. Available: www.sacmeq.org.
- Taylor, N. 2011. Priorities for addressing South Africa's education and training crises. *A Review commissioned by the National Planning Commission*.
- Van der Berg, S. 2005. Fiscal expenditure incidence in South Africa, 1995 and 2000. *Report to National Treasury on aspects of expenditure incidence*. [Online]. Available: <http://www.finance.gov.za/documents/budget/2005/review/Fiscal%20Incidence%20Report.pdf>.
- Van der Berg, S. 2006. How effective are poor schools? Poverty and educational outcomes in South Africa. *Stellenbosch Economic Working Papers*: 06/06. University of Stellenbosch.

References for Chapter 5

- Blecher, M, Day, C, Dove, S, Cairns, R. 2008. *Primary Health Care Financing in the Public Sector: Chapter 12*. Health Systems Trust. South Africa
- Blecher, M, Kollipara, A, DeJager, P, Zulu, N. 2011. Health financing. In Padarath, A and English, R, eds. *South African Health Review*. Durban: Health Systems Trust.
- Botha, C and Hendricks, M. 2008. *Financing South Africa's National Health Systems through National Health Insurance*. Pretoria: Human Science Research Council.
- Christian, C and Crisp, N. 2012. Management in the South African public sector: an x-inefficiency perspective. *Development Southern Africa*, Vol.29, No. 5, December 2012.
- DoH. 2000. The primary health care package for South Africa – set of norms and standards. Pretoria: DoH.
- Doherty, J, Muheki, C, Muirhead, D, Thomas, S. 2000. *Public Sector Financing: Chapter 5*. Health Systems Trust. South Africa.
- FFC (Financial and Fiscal Commission). 2000. Recommendations for the 2001–2004 MTEF cycle. Midrand: FFC.
- Gauteng Provincial Government. 2012. *Provincial government expenditure review*. Gauteng: Provincial Treasury.
- Harrison, D. 2009. An overview of health care in South Africa 1994–2010: priorities, progress and prospective gains. *Discussion Document commissioned by the Henry J. Kaiser Family Foundation to help inform the national health leaders retreat*, Muldersdrift, 2010.

- Kelly, B and Fabius, R. 2010. White Paper: A Path to Eliminating \$3.6 Trillion in *Wasteful Health Care Spending*. Thomson Reuters. United States of America
- Monticelli, F and Barron, P. 2007. *Key District Health Indicators*. Volume 1. Health Systems Trust.
- National Treasury. 2010. *Budget review*. Pretoria: National Treasury.
- National Treasury. 2011. *Budget review*. Pretoria: National Treasury.
- PwC (PricewaterhouseCoopers) Health Research Institute. 2010. The price of excess: identifying waste in health care spending. United States of America.
- Thomas, S, Mbatsha, S, Muirhead, D, Okorafor, O. 2003. Primary health care financing and need across health districts in South Africa. An output of the Local Government and Health Consortium, funded by Health Systems Trust and comprising Health Systems Trust, Centre for Health Policy and Health Economics Unit.

References for Chapter 6

- Altman, M, Hart, T and Jacobs, P. 2009. *Food Security in South Africa*. Pretoria: Human Sciences Research Council.
- Battersby-Lennard, J and Haysom, G. 2012. Urban Food Security and Urban Food Policy Gap. *Paper delivered at Towards Carnegie III Conference*. 3–7 September 2012.
- Battersby-Lennard, J and Peyton, S. 2014. Geography of supermarkets in South Africa: supermarket expansion and food access. Netherlands: Urban Forum.
- DAFF (Department of Agriculture, Forestry and Fisheries). 2013a. *Fetsa Tlala: integrated food production initiative*. Pretoria: DAFF.
- DAFF (Department of Agriculture, Forestry and Fisheries). 2013b. National policy on food and nutrition security. Pretoria: DAFF.
- Department of Agriculture. 2002. *Integrated food and nutrition security strategy*. Pretoria: Department of Agriculture.
- FAO (Food and Agriculture Organization). 2009. Declaration of the World Food Summit on Food Security. Rome: Food and Agriculture Organization of the United Nations.
- OECD (Organization for Economic Co-operation and Development). 2001. *Glossary of Statistical Terms*. [Online]. Available: <http://guides.is.uwa.edu.au/content.php?pid=43218&sid=328596>.
- RSA (Republic of South Africa). 1996. *Constitution of the Republic of South Africa*, Act 108 of 1996.
- StatsSA (Statistics South Africa). 2003-2013. *Consumer Price Index*. Pretoria: StatsSA.

References for Chapter 7

- Alam, M (ed.). 2010. *Municipal Infrastructure Financing: Innovative Practices from Developing Countries*. London: Commonwealth Secretariat.
- Alm, J. 2010. Municipal finance of urban infrastructure: knowns and unknowns. *Working Paper No. 19*. Wolfensohn Center for Development, July.
- Asian Development Bank. 2008. Public-Private Partnership Handbook. [Online]. Available: <http://www.adb.org/documents/public-private-partnership-ppp-handbook>.
- Blaauw, D and Mantso, P. 2009. The role of the municipal bond market in municipal infrastructure development in South Africa. *Africa Insight*, Vol. 39 (2), September.
- FFC (Financial and Fiscal Commission). 2013. Sustaining local government finances. Final report on the public hearings on the review of the local government fiscal framework. Midrand: FFC.
- Kitchen, H. 2006. Municipal infrastructure financing: a prescription for the future. *Director, Research and Analysis Infrastructure*, Canada, February.
- Liebig, K, Bahrinipour, M, Knodler, B, Schonhofen, C and Stein, M. 2008. *Municipal borrowing for infrastructure service delivery in South Africa: A critical review*. German Development Institute. [Online]. Available: [http://www.die-gdi.de/CMSHomepage/openwebcms3.nsf/\(ynDK_content-ByKey\)/ANES-7FJGG2/\\$FILE/Studies%2034.pdf](http://www.die-gdi.de/CMSHomepage/openwebcms3.nsf/(ynDK_content-ByKey)/ANES-7FJGG2/$FILE/Studies%2034.pdf).
- Liu, L and Waibel, M. 2008. Sub-national borrowing, insolvency and regulation. In Shah, A (ed.) *Macro Federalism and Local Finance*, pp 215–242. Washington DC: The World Bank.
- Platz, D. 2009. Infrastructure finance in developing countries – potential of sub-sovereign bonds. DESA Working Paper No. 76, United Nations, July.
- Moody's. 2005. *Introduction to Moody's Statistical Handbook: Non-US Regional and Local Governments*. New York: Moody's.
- National Treasury. 2008. *Local government budget and expenditure review 2003/04–2008/09*. Pretoria: National Treasury
- National Treasury. 2010. *Local government budget and expenditure review 2005/06– 2009/10*. Pretoria: National Treasury.

- National Treasury. 2011. *Local government budget and expenditure review 2010/11*. Pretoria: National Treasury.
- National Treasury. 2012a. Building municipal credit markets in South Africa. Unpublished paper.
- National Treasury. 2012b. *State of local government finances and financial management*. Pretoria: National Treasury

References for Chapter 8

- AGSA (Auditor-General South Africa). 2013. *Consolidated general report on local government audit outcomes 2011/2012*. Pretoria, South Africa.
- Dodson, J, Mees, P, Stone, J and Burke, M. 2011. The principles of public transport network planning: A review of the emerging literature with select examples. *Issue Paper 15*, Urban Research Program, Griffith University, Australia.
- DoT (Department of Transport), 1996. *White Paper on National Transport Policy*. Pretoria, South Africa.
- DoT. 1998. *Moving South Africa action agenda: urban passenger module*. Pretoria: DoT.
- DoT. 2003a. The 2003 National Household Travel Survey datasets, Pretoria.
- DoT. 2003b. Development of a national public transport subsidy policy and strategy. *Policy statement*, 2nd Draft.
- DoT. 2004. Draft report on strategic subsidy options – for the transformation of the South African taxi industry. Pretoria: DoT.
- DoT. 2006. Subsidy analysis and reform options with regard to current public transport services. Pretoria: DoT.
- DoT. 2009. Bus subsidy budget shortfall 2008/2009. *Presentation to the transport portfolio committee*. Cape Town, South Africa.
- FFC (Fiscal and Financial Commission), 2013. Technical report: Effective devolution of transport functions to municipalities. Midrand, South Africa.
- Ekurhuleni. 2013. Ekurhuleni household travel survey report. Kempton Park: Ekurhuleni. Gauteng Department of Roads and Transport. 2002. The 2002 Gauteng household travel survey data. Johannesburg: Gauteng Department of Roads and Transport.
- Goyns, PH. 2008. Modelling real world driving, fuel consumption and emissions of passenger vehicles: a case study in Johannesburg. PhD Thesis, Department of Geography, Environmental Management and Energy Studies, Faculty of Science, University of Johannesburg, Johannesburg.
- Lawless, A. 2007. Numbers and needs in local government: Civil engineering- the critical profession for service delivery. South African Institution of Civil Engineering, South Africa.
- Litman, T. 2013. Well measured: Developing indicators for sustainable and liveable transport planning. Victoria Transport Policy Institute, Canada.
- Maphakela, W, Mashiri, M, Chakwizira, J and Mpondo, B. 2013. Building a sustainable platform for low-cost mobility in South Africa. *Proceedings of the 32nd Southern African Transport Conference*, Pretoria, South Africa.
- Meyer, MD, Campbell, S, Leach, D and Coogan, M. 2005. Collaboration: The key to success in transportation. *Transportation Research Record*, 1924: 153–162.
- Mokonyama, M. 2010. Responsible transport practices. Proceedings of the Green Economy Summit. Sandton, South Africa.
- Mokonyama, M and Mubiwa, B. In press. Transport in the shaping of space. *In Changing Space: Johannesburg within its City-Region*. Johannesburg: Wits University Press.
- NPC (National Planning Commission). 2011. *National Development Plan 2030: our future – make it work*. Pretoria: NPC.
- Page, O, Moeketsi, P and Schurink, W. 2001. *Crime and crime prevention on public transport*, Unisa Press, South Africa.
- Rivasplata, C, Iseki, H and Smith, A. 2012. Transit coordination in the US: A survey of current practice. *Journal of Public Transportation*, Vol. 15, No. 1: 54–73.
- Stone, J. 2011. Can European models of public transport governance help to solve Australian cities? *Working Paper: Institute for Social Research*. Melbourne, Victoria: Swinburne University of Technology.
- Wall, K, Milford, R. and Kubuzie, M. 2007. The national infrastructure maintenance strategy. *Proceedings of the 71st IMESA Conference Sustainable municipal engineering 2010 and beyond*, International Convention Centre, Durban.

Walters, J. 2011. Overview of public transport policy developments in South Africa. *Proceedings of Thredbo 12: International conference series on competition and ownership in land passenger transport*, Durban South Africa.

WHO (World Health Organisation), 2013. Global status report on road safety: Supporting a decade of action. Geneva: WHO.

References for Chapter 9

- Altman, M, Harris, H, van der Linde, A, Fleming, D, Davis, R and van Seventer, D. 2010. Electricity pricing and supply: with special attention to the impact on employment and income distribution. [Online]. Available: www.hsrc.ac.za.
- Barnard, H. 2010. An analysis of municipal tariff determination. [Online]. Available: <http://eepublishers.co.za/printarticle/ameu-convention-2010.html>
- Bisseker, C. 2012. Municipalities – on the road to nowhere. [Online]. Available: www.financialmail.co.za.
- Cameron, M and Rossouw, R. 2012. Modelling the economic impact of electricity tariff increases on Eskom's top customer segment. [Online]. Available: www.nersa.org.za
- Eskom. 2012. Overview of multi-year price determination, 2013/14-2017/18. [Online]. Available: www.eskom.co.za.
- Gawel, E and Bretschneider, W. 2011. Affordability as an institutional obstacle to water-related price reforms. [Online]. Available: <www.iamo.de/dok/sr_voll58.pdf>.
- Inglesi-Lotz, R. 2012. The sensitivity of the South African industrial sector's electricity consumption to electricity price fluctuations. [Online]. Available: <http://ideas.repec.org/p/pre/wpaper/201225.html>.
- National Treasury. 2013. New local government equitable share formula and free basic electricity. *Presentation by National Treasury to the Portfolio Committee on Energy*, 18 June 2013.
- Nedlac. 2010. A study into approaches to minimise the impact of electricity price increases on the poor. [Online]. Available: www.thedti.gov.za.
- RSA (Republic of South Africa). 1996. *Constitution of the Republic of South Africa*, Act 108 of 1996.
- RSA. 2000. *The Municipal Systems Act*, No. 32 of 2000.
- RSA. 2003. *The Free Basic Electricity Policy*, No. 25088.
- RSA. 2004. *Local Government: Municipal Finance Management Act*, No. 56 of 2003.
- RSA. 2006. *Electricity Regulation Act*, No. 4 of 2006.

References for Chapter 10

- DHS (Department of Human Settlements). 2004. *Breaking New Ground: A comprehensive plan for the development of sustainable human settlements*. Pretoria: DHS.
- FFC (Financial and Fiscal Commission). 2011. Challenges and opportunities in housing finance in South Africa. *Submission to FFC Public Hearings 2011*.
- FFC. 2012. Summary of sustainable financing of housing public hearings November 2012. Midrand: FFC.
- FFC. 2013. Exploring alternative finance and policy options for effective and sustainable delivery of housing in South Africa. FFC: Midrand.
- NPC (National Planning Commission). 2011. *National Development Plan 2030: our future – make it work*. Pretoria: NPC.
- StepSA (Spatial Temporal Evidence for Planning South Africa). 2008. A national overview of spatial trends and settlement characteristics. [Online]. Available: <http://stepsa.org/regional-spatial-profiles/documents>

References for Chapter 11

- ANC (African National Congress). 2013. African National Congress 53rd Conference Resolutions, Chapter 4, Resolution 10.2.3. Mangaung: ANC.
- City of Tshwane. 2011. *City of Tshwane 2011 Annual Report*. Gauteng: Tshwane Municipality.
- Hansen, SW, Kurt H and Pedersen. LH. 2014. Do municipal mergers improve fiscal outcome? *Nordic Political Science Association*, 37(2).
- National Treasury. 2008. Local government budget and expenditure review 2007/08. Pretoria:
- National Treasury. 2011. Local government budget and expenditure review 2010/11. Pretoria:
- Vojnovic, I. 2000. Municipal consolidation, regional planning and fiscal accountability: the recent experience in two maritime provinces. *The Canadian Journal of Regional Science*, 49–72.

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