



# **Is the Local Government Adequately Funded in South Africa?**

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## Abstract

South Africa is currently grappling with the triple challenges of poverty, inequality and unemployment. To deal with these challenges, the country requires a strong local government. As the sphere closest to people the local government sector should ideally be adequately resourced to deliver quality public services to communities. The sector has an important constitutional mandate to provide local communities with basic services such as electricity, water and sanitation, refuse removal and roads. To discharge their functions, local governments rely on own revenues and (albeit in different proportions) on national and provincial transfers. Over the past two decades the local government sector has received a steady increase in transfers from national and provincial governments to ensure that the sector fulfils its constitutional assigned mandate. The increase in resources going to the local government sector has not translated into commensurate service delivery improvements in the majority of municipalities. Many municipalities face a number of challenges which, in many cases have been perceived as emanating from insufficient funding from national government. In this regard, this paper examined the adequacy of funding for municipalities relative to their mandate. The focus was on the adequacy of capital funding relative to the provision of electricity, water and sanitation, refuse removal and roads and Stormwater. Using cost functions, the results suggests that capital investment requirements general exceed grant funding for electricity, solid waste and roads and stormwater. The Municipal infrastructure grant is equal to 74% of the investment requirements for electricity, and 29% for roads and stormwater. However, grant funding for water and sanitation exceeds the investments required by 20%. Thus, the key message of this paper is that the country needs to adequately invest in the provision of roads.

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## 1. Introduction

South Africa is currently grappling with the triple challenges of poverty, inequality and unemployment. The percentage of the population that is poor is close to 45% with about 20% living in extreme poverty. In 2011 the Gini coefficient (income per capita including salaries, wages and social grants) was estimated at 0.69. To deal with these challenges, the country requires a strong national economy. It is important to emphasize that underpinning a strong national economy is a strong local government that has the resources to deliver the public services that communities need. The local government, as the sphere closest to people, plays a key role in facilitating development and improving living standards. Local governments are typically assigned a range of functions by the constitution and other legal provisions. The sector has an important mandate of providing local communities with economic and social services, among others, local planning, infrastructure and services for economic activities, e.g. electricity, water and sanitation, refuse removal, roads, local economic development, and community services.

To execute these functions, local governments have to rely on their own revenues, and in different degrees, on transfers. On average, own revenues fund 75% of municipal budgets. However, for a number of municipalities, own revenues constitute a small proportion of their budgets, with some (in particular rural) municipalities even depending on transfers to the tune of over 80% of their budgets. Over the past two decades, the local government sector has received a steady increase in transfers from national and provincial governments in a bid to ensure the sector fulfils its constitutional assigned mandate. For example, in the 2001/01 financial year, the sector received R6 billion or 3% of the Division of Revenue allocations. In 2015/16 the sector was allocated about R100 billion or 9% of the Division of Revenue funds. The increase in resources going to the local government sector has not translated into commensurate service delivery improvements in the majority of municipalities. Many municipalities face the dilemma of expanding expenditure requirements and shrinking fiscal space. Some municipalities are characterised by limited scope for economic diversification, deficient services and infrastructure. Challenges faced by municipalities have been perceived as a byproduct of insufficient financing by national government. These perceptions have been compounded by the fact that only 9% of the Division of Revenue funds are currently allocated to the local government sector. As many municipalities continue to face poverty, deficient services and infrastructure, the claims that the quantum of funds directed to municipalities are insufficient has gained prominence. As the sphere closest to people, municipalities require adequate resources to reverse the process of social and economic decline in the country. However, to date no independent empirical work has been carried out to ascertain whether funding for municipalities is sufficient. The other challenge is that these transfers have been made without some full knowledge of the actual costs of providing these services. Without this knowledge it becomes difficult to ascertain whether the funds provided are adequate or not. The purpose of this paper is to fill this gap and in particular examine the adequacy of funding for municipalities relative to their mandate. The key focus of this study

is to investigate whether current capital grant allocations to municipalities are adequate to address current and future capital needs of municipalities. The study costs municipal capital services, quantifies the need, and on the basis of these costs and needs on the ground, establish whether transfers are adequate or not. As infrastructure is important for service delivery, the main focus of the present paper is on the adequacy of capital grant funding. Thus, by answering the question of whether grant funding to municipalities are adequate, this study will contribute to the objective of improving access to basic services to many, and improving the viability of municipalities.

## **2. Hypothesis**

The primary hypothesis of this paper is that capital funding for rural municipalities is inadequate relative to the mandate that these municipalities have.

## **3. Background**

This section provides a brief overview of the funding issues in the local government sector. The section begins by profiling municipalities, followed by some highlights on the funding issues. Figure 1 and Table 1 provide some distinguishing features of municipalities. It is evident from Figure 1 that many municipalities are characterised by relatively high levels of poverty and service backlogs. Poverty is more acute in rural municipalities (B3s and B4s). Rural municipalities are also characterised by low levels of economic activity compared to their urban counterparts. GVA per capita for rural municipalities is only R9, compared to R76 in metros. The low economic activity in many municipalities translates into lower employment levels and lower revenue base. The employment rate in rural municipalities averages 13%, compared to 34% in metros and 29% in secondary cities. This statistic points to a limited own revenue base for rural municipalities. The limited own revenue base of rural municipalities is also demonstrated in Table 1. Rural municipalities rely to the tune of 70% on government grants and raise only 6% and 11% of property rates and service charges, respectively. For municipalities with such a limited revenue base, it means that grants to these municipalities should be adequate to enable them fulfil their mandate.

Figure 1 Characteristics of Municipalities

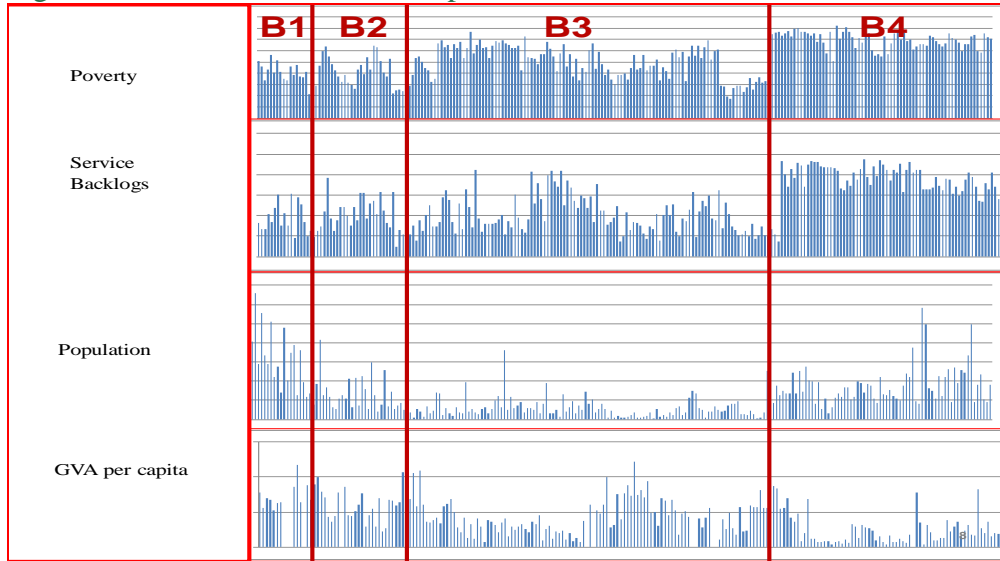
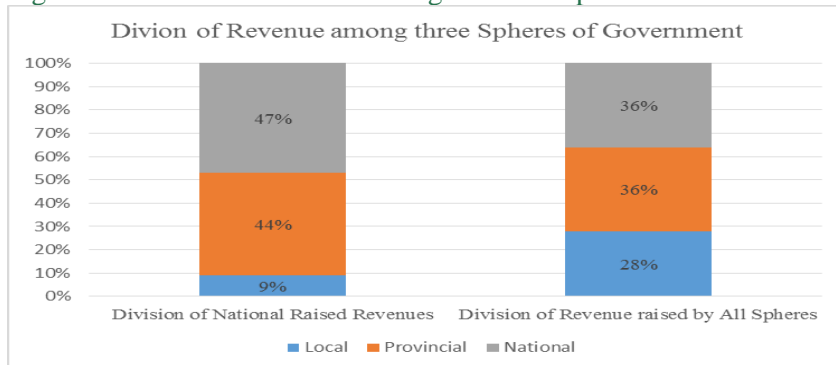


Table 1 Socio Economic Profiles of Municipalities

Type of Municipality	Government Grants	Investment Revenue	Other	Property Rates	Public Contributions	Service Charges	Total GVA per capita
Metro	24%	2%	9%	18%	0%	48%	76
Secondary cities	25%	1%	14%	14%	0%	46%	51
Larger towns	28%	1%	9%	19%	0%	42%	41
Smaller Towns	40%	1%	10%	11%	0%	37%	30
Rural Municipalities	70%	1%	12%	6%	0%	11%	9.44

Figure 2 shows the revenue allocations between the three spheres. The local sphere receives 9% of national raised revenues, compared to 44% and 47% for provincial and national spheres, respectively. When revenues raised by all spheres are considered, the local spheres receives 28%, compared to 36% apiece for national and provincial spheres. These imbalances in the allocations of revenues has raised claims that the local sphere is unable to deliver on their mandate because revenues allocated to this sphere are inadequate.

Figure 2 Division of Revenue among the three Spheres of Government



#### 4. Related Literature: Adequacy of funding

This section provides a summary of previous literature on the adequacy of funding for municipalities. As has been noted above, the issue of adequate funding has received little attention in both local and international literature. Locally, the issue has not been scrutinised

despite pronouncements from various municipalities that resources are inadequate. Internationally, there are quite a few studies that have looked at funding adequacy of the local government sector in general. One of the studies that has examined this issue is Hancock, (2002) using Australian local government data. Based on survey data, Hancock observes that funding for local government was adequate, despite continuous upward pressures on local government spending.

Table 2 summarizes evidence on the adequacy or otherwise of funding for local government across both developing and developed countries. From Table 2 it would seem local governments are adequately funded in developed countries while the opposite obtains for developing countries. The adequacy of funding is probably linked to a country's level of development and affluence. This mixed set of evidence suggests that the issue depends on each country's contextual circumstances and can only be answered through empirical evidence.

**Table 2 Summary of Literature on the adequacy of Local Government Funding**

India	Large urban LG resources adequate; small urban and rural governments severely resource constrained
Pakistan	Most local governments suffer harsh resources constraints
Australia	LGs have sufficient resources for their responsibilities
Bangladesh	Resources of LGs severely constrained
Nepal	Resources of LGs severely constrained
Japan	LG current and capital resources adequate
China	LG resources constrained especially at the lowest level of government
Korea	LG current and capital resources adequate
Thailand	LGs have sufficient resources for their responsibilities

Source: Gold (2010)

## 5. Methodology

The main objective of this paper is to find out whether capital funding for municipalities is adequate or not. Adequacy is essentially about whether the funds allocated to municipalities are sufficient for a municipality to cover the costs of its mandated services. This paper considers the adequacy of capital expenditure, i.e expenditure used to create new assets, or increase the capacity of existing assets beyond their original design capacity, or to return the service potential of the asset. To establish whether funding for municipalities is adequate, we establish the cost of essential infrastructure services provided by the local government and then compare these costs with grants allocated to municipalities. The costs of capital goods (investments required) which comprise of reducing access backlogs and investing in new assets are computed using an Excel based model.



### 5.1. The Model

The model developed recognise the fact that asset care has been neglected in the municipal space, and that a renewals backlog is emerging. The World Bank, the National Treasury, the FFC and South African Cities Network have all in recent years published research confirming this matter. National Treasury has also issued an MFMA Circular 55 that requires municipalities to allocate at least 40% of their capital budgets towards asset renewal. The cost model informing the cost estimates presented in this paper considered responsible asset custodianship whereby the application of capital investment (to renewal, new infrastructure creation and upgrading) is based on rational approach aimed at sustainability in asset portfolios and therefore the productive capacity vested in those portfolios. The model is therefore not primarily based on municipal budget provisions, but rather on a combination of the needs to address service access backlogs through infrastructure creation and upgrading, and with respect to renewal, the condition and level of annual asset consumption determined through the Depreciated replacement cost method. In this model, investment in ‘New and upgrading of infrastructure’ has been based on the growth in households while investment in ‘Renewals’ is based on a (service specific, component based) annual depreciation as a percentage of the Current Replacement Cost value.

Additional key features of the model include:

- A comprehensive profiling of municipal-specific (e.g. nr of households in a particular municipality located on mountainous terrain).
- The costs of municipal basic services are moderated individually, per category or in total, based on exogenous cost-influencing factors such as spatial characteristics, topography and geology.
- The model allows for temporal adjustments to variable base datasets (e.g. Population size and number of households).
- The model discourages municipal inefficiencies through the establishment of loss-limiting factors through a combination of quantification of demand based on national policy allowance and the setting of limits for unaccounted water and electricity. These realistic levels of consumption of utility services and production of wastes are shown in Table 3 below.

Table 3 Provision for Realistic Levels of Consumption of Utility Services and Production of Wastes

Infrastructure service	Description	Allowance	Unit
Water	Free / Basic	6	kl/month per hh
	Allowance for acceptable level of losses / minimisation	20	%
	Effective demand	86,4	kl/pa per hh
Electricity	Free / Basic	50	kWh/month per hh
	Allowance for acceptable level of losses / minimisation	10	%
	Effective demand	660	kWh/pa per hh
Solid waste	Free / Basic	1,2	kg/day per hh
	Allowance for acceptable level of losses / minimisation	25	%
	Effective demand	329	kg/pa per hh
Sanitation	Free / Basic	4	kl/month per hh
	Allowance for acceptable level of losses / minimisation	0	%
	Effective demand	48	kl/pa per hh

## 5.2. Capital Costs Estimates

The model is used to estimate capital costs which will be used to determine the capital required to fulfil the need for infrastructure in municipalities. The capital required will in turn be compared with grants to ascertain the adequacy of these grants. Capital cost estimates have been determined per service (e.g. sanitation), per household based on average current replacement costs per household as determined for a sample of 32 municipalities (i.e.12% of the municipalities). These municipalities are listed in Table 4. In most of these municipalities asset valuation has been done for purposes of asset register preparation. The constituent elements included in capital costs used in determining current replacement cost are as defined in the Generally Recognised Accounting Practice Standard 17 on Property, Plant and Equipment (GRAP 17). GRAP 17 defines the elements of the capital cost of assets as follows (March 2012: 11-12):

- Purchase price, inclusive of import duties and non-refundable purchase taxes after deduction of trade discounts and rebates.
- Any costs attributable to delivering the asset to the location and condition necessary for it to be able to operate in the manner intended by management.
- The initial estimate of costs to dismantle and remove the structure or item, and to restore the site on which it is located.

Table 4 Municipal Asset Valuations Informing Asset and Capital Costs Estimates

Municipality	Province	Roads & Stormwater	Water	Sanitation	Refuse Removal	Electricity	Municipal administration	Health services	Fire-fighting
Buffalo City	EC	•	•	•	•	•	•	•	•
Ekurhuleni	GAU	•	•	•	•	•	•	•	•
Johannesburg	GAU		•	•					
Tshwane	GAU		•	•					
Emfuleni	GAU	•	•	•	•	•	•	•	
Govan Mbeki	MPU	•	•	•	•	•	•	•	
Lephalale	LIM		•	•					
Mogale	GAU	•	•	•	•	•	•	•	•
Msunduzi	KZN	•							
Polokwane	LIM	•	•	•	•	•	•	•	•
Steve Tshwete	MPU	•	•	•	•	•	•	•	•
Abaqulusi	KZN								
Albert Luthuli	MPU	•	•	•	•	•	•	•	
Bela-Bela	LIM	•	•	•	•	•	•	•	
Dipaleseng	MPU	•	•	•	•	•	•	•	
Dr JS Morola	MPU	•					•		
Elias Motsoaledi	LIM	•	•	•	•	•	•	•	
Merafong	GAU	•	•	•		•	•		
Mkondo	MPU	•	•	•	•	•	•	•	
Modimole	LIM		•	•					
Mohokare	FS	•	•	•	•	•	•	•	
Mookgophong	LIM	•	•	•	•	•	•	•	
Msukaligwa	MPU		•	•					
Naledi	FS	•	•	•		•	•		
Pixley-ka-Seme	MPU		•	•					
Randfontein	GAU	•	•	•			•		
Thembisile Hani	MPU	•	•	•		•			
Victor Khanye	MPU	•	•	•	•	•	•	•	
Westonaria	GAU	•	•	•		•	•		
Greater Sekhukhune	LIM	•	•	•			•	•	•
Ugu	KZN		•	•					
West Rand	GAU							•	



Metropolitan municipality



Other local municipality



Secondary city (local municipality)



District municipality

The Cost estimates informing the asset valuations of the municipalities noted in this paper were in turn based upon COGTA's "Municipal Infrastructure: An Industry Guide to Infrastructure Service Delivery Levels and Unit Costs – June 2010" as well as of cost records of infrastructure acquisition or construction projects in these municipalities.

Capital costs tend to vary from one municipality to another. A number of factors can significantly influence the cost of infrastructure development (CAPEX). The following key factors were selected to moderate projected CAPEX:

- Topography (flat, rolling or mountainous terrain)
- Location (coastal or inland);
- Distance from economic centres;
- Development status referring to number of settlements and densities; and
- Loss of economy of scale

These factors have been selected since credible and consistent national data is available for all municipalities. In addition, there are other cost influencing factors, such as the type of technology and configuration of infrastructure that also affect municipal service costs. A geo-spatial profile was developed for all municipalities in South Africa which includes all cost-influencing factors listed above. However there is a set of factors that was not considered but which could be important in determining capital costs, e.g. geo technical information and soil type and condition, as unstable soils could add a construction premium. Such factors were excluded as data is limited, and in many cases outdated and generally not prepared in a consistent format. In future years it may become necessary to add geo-technical factors to the list of cost-influencing factors as when the trend of urbanisation continues, cities become denser and greenfield land availability in city spaces become more limited.

Capital Costs were determined through costing backlogs and new investments. Service access backlogs have been based on the 2011 Census data, adjusted to 2015. The following estimates (Table 5) have been derived as the status of backlogs per province for 2015.

Table 5 Backlog Status per Province for 2015

	Energy	Water	Sanitation	Solid Waste	Roads
Western Cape	5.80%	2.70%	9.70%	14.40%	12.90%
North Cape	10.80%	6.40%	18.10%	25.50%	13.90%
Eastern Cape	17.80%	25.70%	37.00%	50.90%	31.20%
Free State	8.20%	3.90%	20.30%	24.00%	17.90%
Kwa Zulu Natal	25.30%	29.70%	37.40%	63.90%	34.20%
Mpumalanga	11.30%	13.10%	30.60%	39.50%	18.40%
Limpopo	9.40%	21.20%	50.20%	63.60%	9.80%
North West	13.30%	14.00%	35.50%	48.60%	19.00%
Gauteng	12.0%	14.00%	11.00%	11.50%	20.50%
Total	14.50%	5.00%	30.20%	43.20%	22.00%

The unit cost of municipal services were computed and were based on:

- actual costs;
- benchmarked actual costs;
- average costs; or

- A combination of the above.

The following unit rates (Table 6) were adopted to determine capital costs.

Table 6 Unit Rates adopted to determine Capital Costs

Sector	CRC R per household	PDG Category
Roads and Storm water	44.475	A
	35 188	B1
	20 170	B2-B3
	11 186	B4, C1, C2
Water	16 059	A, B1
	18 155	B2-B4
Sanitation	18 405	A, B1
	15 367	B2-B3
	9 061	B4
Electricity	14 797	A, B1-B4
Solid Waste	1 175	A, B1
	544	B2-B3
	314	B4

The basis for the unit costs is shown in Table 7 below.

Table 7 Basis for Unit Rates Adopted

Electricity	R per HH	category	substation	MV Conductor	LV Conductor	Pole Transformer	Connections
	14797	A, B1-B4	1102	1438	8703	825	2728

Roads and Stormwater	RR Per HH	Category	Pavement	Stormwater	Public Utilities	Road Furniture	Street Lights
	44475	A	33810	9661	0	633	372
	36188	B1	27510	7861	0	515	302
	20170	B2-B3	15333	4381	0	287	169
	11186	B4, C1, C2	9127	1836	64	159	0

Solid Waste	RR Per HH	Category	Garden Refuse	Land fill Site	Transfer Stations
	1175	A, B1	3	1135	37
	544	B2-B3	1	543	0
	314	B4	1	313	0

Sanitation	RR Per HH	Category	Outfall sewers	Reticulation	Connections	Pump Station	WWTW	VIP Toilets
	18405	A, B1	3551	10206	126	257	4264	0
	15367	B2-B3	2965	8522	105	215	3560	0
	9061	B4	411	1180	15	30	493	6933

Water	RR Per HH	Category	Dams & Boreholes	Bulk Mains	Distribution	Reservoirs	Connections	Pump Station	WTW
	1609	A, B1	1967	4385	6278	1505	1067	340	518
	18155	B2-B4	2223	4958	7097	1701	1206	384	584

Source: Authors Calculations

## 6. Data

As noted above the costs of municipal services were based on actual costs, benchmark actual costs, average costs and a combination of the three mechanisms. Primary unit cost and benchmark data was sourced from a sample of 32 municipalities, i.e. 12% of the total 278 municipalities in South Africa. The sample cuts across all municipality categories: from metros to B4s, and includes municipalities in 7 of South Africa's provinces. Secondary data, especially on municipal profiles was sourced from the National Treasury, sector departments Stats-SA, demarcation Board, Agricultural Research Council, Audited municipal annual financial statements and budgets, Quantec, SALGA, and SAFCEC. The profiling data included, the number of households, and number of poor households, number of households with various levels of service, total number of households, geographical and topographical attributes, budgeted and actual municipal expenditure. Service access backlogs were based on the 2011 Census data and adjusted to 2015.

## 7. Results

The present section provides answers on the question whether capital grants to electricity, solid waste, roads and stormwater and water and sanitation are adequate. In each section the amount of investment required for each service are quantified and then compared with relevant grant allocations. To estimate the costs of backlogs, we assume that municipalities are able to service 15% of the existing backlogs per annum. So for 2015 the costs of the backlogs will equal to 15% of the existing backlogs.

### 7.1. Adequacy of Funding for Electricity

Typically capital expenditure for electricity infrastructure includes the following asset types:

- HV and MV Substations and switching stations
- Mini-substations
- MV transformers (Pole Mounted, Floor Mounted or Indoor)
- Overhead conductors (HV, MV and LV)
- Cables (HV, MV and LV)
- Service connections (kiosks, conductors, meters)

For purposes of cost estimates in this study it is assumed that all municipalities buy bulk electricity from Eskom, and that the extent of off-grid supply is not material - hence generation infrastructure is excluded from the scope of infrastructure to be funded. The estimated capital investment required for electricity in 2015 by province are shown in Table 8 below.

Table 8 Estimated Capital Investments Required for Electricity per Province (2015)

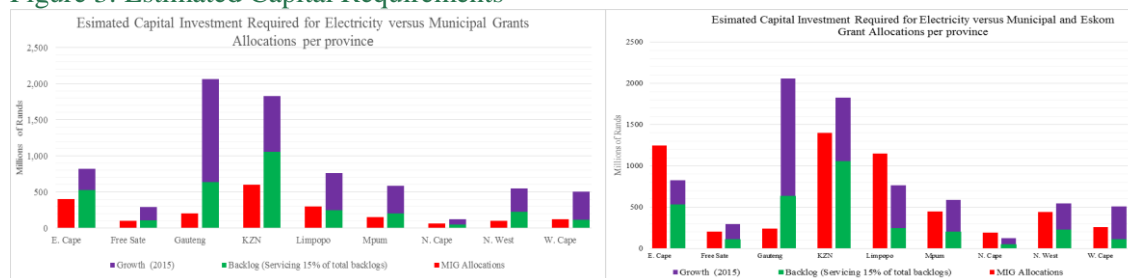
Electricity	1 Growth 2015	2 Backlog -15% of Total Backlog	3 Total Need (1+2)	4 Growth in poor HH (2015)
Eastern Cape	294 310 549	530441215	824751764	17746
Free State	184984515	108562323	293546838	11154
Gauteng	1424322370	636193213	2060515583	85883
KwaZulu Natal	767689091	1058842304	1826531395	46290
Limpopo	516472892	248804607	765277499	31142
Mpumalanga	386219374	200604221	586823595	23288
Northern Cape	74088534	48222920	122311455	4467
North West	316562139	228124857	544686997	19088
Western Cape	393772403	113890031	507662433	23743
Total	4 358 421 867	3 173 685 691	7 532 107 559	262801

Source: Authors Calculations

The above table suggests that the capital investment required for electricity currently stands at R7.5 billion; split into R4.3 billion for new investment to cater for growth in poor households and R3.1 billion to deal with 15% of the backlogs. But are grants adequate to deal with this need? Figure 3 compares the capital investments required for electricity and the grant allocations for electricity per province. From the graph on the left it is clear that in every province the MIG allocations are far lower than the capital investments required. The shortfall is largest in Gauteng where MIG only covers 10% of the required electricity capital investment. As some of the electricity grants are channelled via Eskom, the graph (Figure 3) on the right

compares the sum of municipal and Eskom grants with the need on the ground. In the Eastern Cape, Limpopo and Northern Cape, the sum of the municipal and Eskom grants are adequate to service 15% of the backlogs and for new infrastructure. Again, Gauteng has the largest shortfall. Although own revenues could cover part of Gauteng's shortfall, the gap is too wide for own revenues to close.

Figure 3: Estimated Capital Requirements



## 7.2. Solid Waste

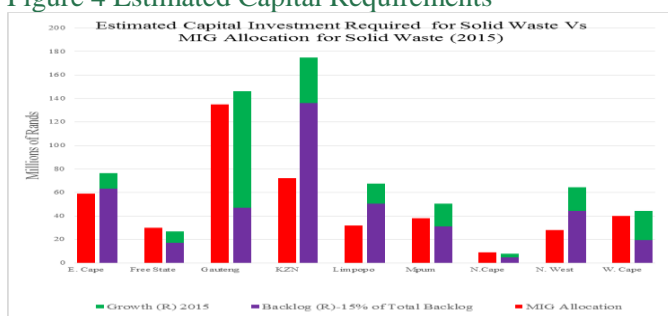
For solid waste the main cost drivers are garden refuse, land fill sites and transfer stations. The estimated total capital required to cover the need (backlogs plus growth) is about R49 million (Table 9). Figure 4 below compares the infrastructure needs for solid waste in Table 9 to the assumed MIG grant municipalities. In fact 86% of the “Other” component in MIG is used in this case, as case studies indicate that on average 86% of the “Other” component of MIG is channelled to refuse removal infrastructure. The result in the first graph of Figure 9 indicates that the grants are insufficient to address needs, serve for Northern Cape and Free State. The shortfall is largest in KZN, Limpopo and North West, amounting to more than 50%.

Table 9 Estimated Capital Investments Required for Solid Waste per Province (2015)

Solid Waste	1 Growth (R) 2015	2 Backlog (R)-15% of Total Backlog	3 Total Need (1+2)	4 Growth in poor HH (2015)
Eastern Cape	13357549	63163156	76520706	17746
Free State	9802596	17065325	26867921	11154
Gauteng	99431932	46971158	146403090	85883
KwaZulu Natal	38820478	136008071	174828549	46290
Limpopo	16835861	50650857	67486719	31142
Mpumalanga	19474437	30974776	50449213	23288
Northern Cape	3147238	4873209	8020447	4467
North West	20307331	44144162	64451494	19088
Western Cape	24814050	19335415	44 149 465	23743
Total				262801

Source: Authors Calculations

Figure 4 Estimated Capital Requirements



### 7.3. Roads and Stormwater

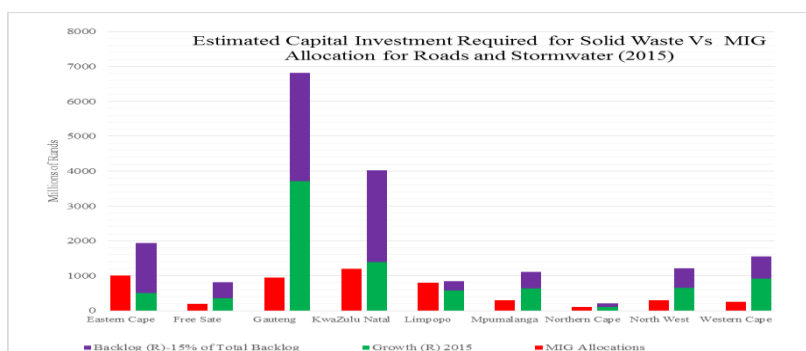
The main drivers of Roads and Stormwater capital spending include pavements, stormwater, public utilities, road furniture and public utilities. The estimated requirement for new infrastructure and servicing backlogs is R18.5 billion (see Table 10). The assumption based on case studies is that municipalities will reduce access backlogs by 15% of the total backlogs. The needs are largest in municipalities in Gauteng province followed by municipalities KZN. Figure 5 below compares the infrastructure needs in Table 10 to the MIG. When needs are compared with MIG grants the results indicate that the grants will be insufficient to address all the needs (growth infrastructure plus 15% of the backlogs). The shortfall in funding is greatest in Gauteng, and it is smallest in Limpopo.

Table 10 Estimated Capital Investments Required for Roads and Storm Water per Province (2015)

Roads Stormwater	1	2	3	4
	Growth (R) 2015	Backlog (R)-15% of Total Backlog	Total Need (1+2)	Growth in poor HH (2015)
Eastern Cape	498784906	1435916414	1934701320	17746
Free State	360012925	458104691	818117616	11154
Gauteng	3706480965	3112891631	6819372595	85883
KwaZulu Natal	1395909926	2626505694	4022415620	46290
Limpopo	573908683	269656473	843565156	31142
Mpumalanga	632243030	475053104	1107296134	23288
Northern Cape	110930086	92592451	203495536	4467
North West	644419353	563762812	1208182165	19088
Western Cape	914526109	637975833	1552501942	23743
Total				262801

Source: Authors Calculations

Figure 5: Capital Requirements for Solid waste





## 7.4. Water and Sanitation

Water is examined separately from sanitation. The main drivers of water capital budgets are dams and boreholes, bulk mains, distribution, reservoirs, connections, pump stations and water treatment centres. Capital investments requirements for water amount to R8.8 billion in 2015, with growth infrastructure accounting for R4.7 billion of this amount. The need for new infrastructure is greatest in Gauteng municipalities, while the need for servicing backlogs is largest in KZN municipalities.

Figure 6 on the left compares the infrastructure needs identified in Table 11 with the basic MIG grant to municipalities, while the graph on the right compares the need to the total infrastructure grants (MIG+MWIG+RBIG+USDG) split equally between water and sanitation. The results suggest that the basic MIG underfunds water infrastructure, whereas when all relevant grants are considered, it seems water is over funded in all provinces serve for North West and to a lesser extent Gauteng province.

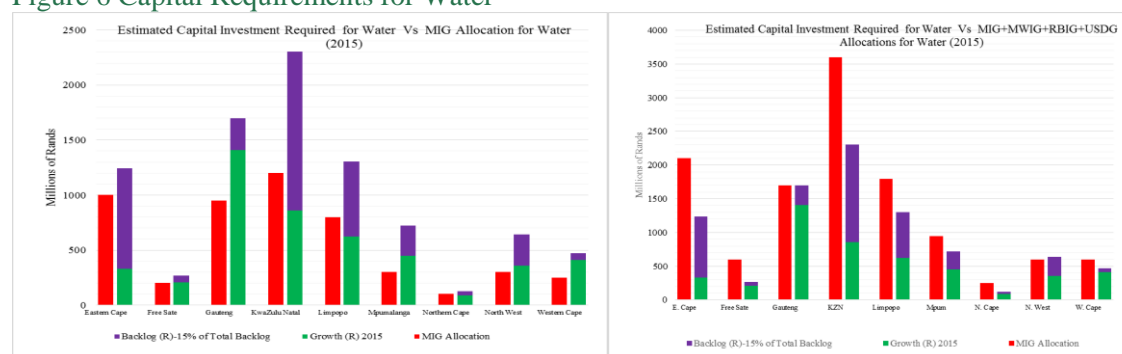
### Water

Table 11 Estimated Capital Investments Required for Water per Province (2015)

Water	1 Growth (R) 2015	2 Backlog (R)-15% of Total Backlog	3 Total Need (1+2)	4 Growth in poor HH (2015)
Eastern Cape	331555107	909780946	121336054	17746
Free State	206835698	61429072	268264769	11154
Gauteng	1408278658	291655224	1699933882	85883
KwaZulu Natal	858357297	1446612926	2304970223	46290
Limpopo	622504299	680988239	1303492539	31142
Mpumalanga	449530147	273886610	723416757	23288
Northern Cape	89293550	34524436	123817986	4467
North West	357891624	282934412	640826037	19088
Western Cape	411783839	60403076	472186915	23743
Total				262801

Source: Authors Calculations

Figure 6 Capital Requirements for Water



## 7.5. Sanitation

On sanitation, the main cost drivers are outfall sewers, reticulation, connections, pump stations, waste water treatment works and VIP toilets. The estimated infrastructure needs for sanitation for 2015 stand at R10.5 billion (see Table 12 per province), i.e. The country requires this amount of investment to cover 15% of the existing backlogs and for new sanitation infrastructure to cover 262 000 additional poor households. Figure 7 on the left

presents a comparison of infrastructure needs for sanitation and the MIG, while that on the right compares the needs to the total infrastructure grants (MIG+MWIG+RBIG+ USDG), split equally between water and sanitation (serve for specific grants like the bucket eradication).

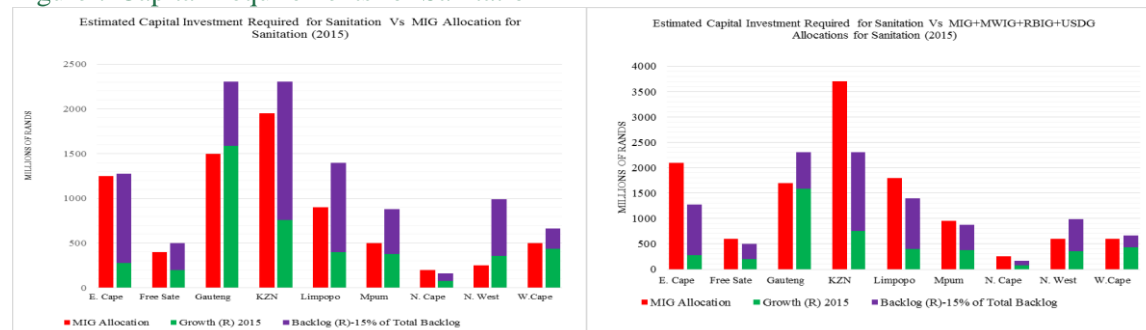
When needs are compared with MIG grants for basic services, it is evident that the grants are insufficient to address the needs, and eradicate 15% of the backlogs for sanitation services. The gap is however very small in municipalities in the Eastern Cape and widest in the North West, Mpumalanga and Gauteng municipalities. When other capital grants for sanitation are taken into account, the results indicate that the needs are provided for, and it should be possible to eradicate the backlogs at a higher rate than the assumed 15% per annum.

Table 12 Estimated Capital Investments Required for Sanitation per Province (2015)

Sanitation	1 Growth (R) 2015	2 Backlog (R)-15% of Total Backlog	3 Total Need (1+2)	4 Growth in poor HH (2015)
Eastern Cape	276564413	1001645912	1278210324	17746
Free State	200071658	301685328	501756986	11154
Gauteng	1588905275	716580803	2305486078	85883
KwaZulu Natal	757530895	1545710449	2303241394	46290
Limpopo	401298802	994077845	1395376647	31142
Mpumalanga	380078374	496891038	876969412	23288
Northern Cape	77603659	83464939	161068599	4467
North West	358765553	633123976	991889529	19088
Western Cape	435058295	227003481	662061776	23743
Total				262801

Source: Authors Calculations

Figure 7 Capital Requirements for Sanitation



## 8. Conclusion

The local government discourses have been swamped with claims, among other others, that the local government sector is underperforming because it is poorly funded. The claim has been that capital grants are inadequate, which gives rise to inadequate infrastructure and thus poor service delivery. The present study sought to throw light on these claims and in particular investigate whether capital funding in the form of grants is adequate for municipalities to deliver on their constitutional mandate. The present study was concerned with the adequacy of capital grant funding to municipalities on the four main basic services; electricity, solid waste, roads and stormwater, and water and sanitation.

To establish the adequacy or otherwise of capital grants to fund infrastructure on the identified basic services, capital investments required for growth infrastructure for 262000

new poor households and the eradication of 15% of the existing backlogs were computed and compared with the capital grant allocations to municipalities. An *Excel-based* model was developed to determine the capital investments required to eradicate backlogs and for new growth infrastructure for poor households. The model discourages municipal inefficiencies through the establishment of loss-limiting factors through a combination of quantification of demand based on national policy allowance and the setting of limits for unaccounted water and electricity.

The results of this investigation suggest that grant funding is generally less than the capital requirements for electricity, roads and stormwater, and refuse removal. MIG is equal to 74% of requirements for electricity, and 29% for roads and stormwater. However in water and sanitation (combined) funding is 20% higher than required, and water and sanitation backlogs can therefore be reduced at higher levels per annum instead of the 15% per annum assumed in this paper. Thus, the key message of this paper is that the country needs to adequately invest in the provision of roads, electricity and refuse removal. If appropriate investment is not rendered on these, the potential of them becoming the economy's major obstacles is real. Electricity is currently a major bottleneck for the economy.

Although this study has pointed out to some gaps in funding, it should also be emphasised that by using existing resources efficiently municipalities would be able to meet some of their investment goals. It is important that cases of maladministration, corruption and underspending eliminated.

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