

**Assessment of factors influencing the adoption of public private partnerships  
in water infrastructure projects in selected municipalities**

**by**

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## DECLARATION OF ORIGINALITY

I, Thulani Mandiriza, student number u18102299, declare that the thesis, entitled “Assessment of factors influencing the adoption of public private partnerships in water infrastructure projects in selected municipalities” which I hereby submit for the degree Doctor of Public Administration and Management at the Faculty of Economic and Management Sciences, University of Pretoria, is my own work and has not previously been submitted by me for a degree at this or any other tertiary institution.

Signature: .....

Date: January 2022

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## **DEDICATION**

This work is dedicated to my father and late mother, for cultivating the quest for learning even though they never had a chance to attain any tertiary qualification. Thank you.

## ABSTRACT

The study assesses the factors influencing the adoption of public private partnerships in water infrastructure projects in selected municipalities. The Constitution of the Republic of South Africa (Schedule 4 Part B) assigns the water provision function to municipalities who are designated as water services authorities. Given that South Africa is the 30<sup>th</sup> driest country worldwide and is facing massive backlogs in water infrastructure due to insufficient investment and maintenance, the study is significant in that it responds to funding challenges facing municipalities to deal with water infrastructure deficits.

The funding options available to municipalities to deal with water infrastructure include transfers or grants from national government, long-term borrowing from financial institutions (including issuing bonds), own revenue sources (service tariffs) and entering into public-private partnerships (PPPs). PPPs are hardly used to fund municipal water infrastructure projects. The study therefore has the following objectives:

- To determine the extent to which the regulatory framework governing municipal PPPs in South Africa compares to international best practice;
- To determine the extent to which the regulatory framework governing municipal PPPs in South Africa influences the adoption of water infrastructure projects in selected Gauteng Province municipalities; and
- To assess the factors influencing the adoption of PPPs in water infrastructure in selected municipalities in the Gauteng Province.

The study therefore seeks to establish whether the promulgation of the Municipal PPP Regulations has influenced the uptake of PPPs in water infrastructure projects in selected Gauteng Province municipalities, namely the City of Johannesburg Metropolitan Municipality, the City of Tshwane Metropolitan Municipality, the City of Ekurhuleni Metropolitan Municipality and the Midvaal Local Municipality.

A qualitative research method through the use of case studies was utilised in this study. Case studies provide detailed descriptions of the events and provide a broader contextualisation of the issues under study from multiple perspectives, multiple participants and utilising multiple levels of analysis. Both primary sources



(interviews from various stakeholders) and secondary information (documentary review) were utilised in this study. Key documents consulted in this study include among others: PPP benchmark reports, previous studies done on PPPs in South Africa, various PPP frameworks, municipal approved budgets, integrated development plans, approved budgets for the Midvaal Local Municipality, the City of Johannesburg Metropolitan Municipality, the City of Tshwane Metropolitan Municipality, the City of Ekurhuleni Metropolitan Municipality and Statistics South Africa.

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## LIST OF ABBREVIATIONS AND ACRONYMS

ACDP	African Christian Democratic Party
ADB	African Development Bank
AGSA	Auditor General of South Africa
AIC	African Independent Congress
ANA	National Agency for Water (Brazil)
ANC	African National Congress
BANOBRAS	National Bank for Public Works and Services (Mexico)
BBBEE	Broad-Based Black Economic Empowerment
BEE	Black Economic Empowerment
BOT	Build, Operate and Transfer
CIA	Central Intelligence Agency
CMA	Catchment Management Agency
CNA	National Water Commission (Mexico)
CODESA	Convention for Democratic South Africa
COE	City of Ekurhuleni
COGTA	Ministry of Cooperative Governance and Traditional Affairs
COJ	City of Johannesburg
COPE	Congress of the People
COT	City of Tshwane
DA	Democratic Alliance
DBSA	Development Bank of Southern Africa
DCOG	Department of Cooperative Governance
DFID	Department for International Development (UK)
DORA	Division of Revenue Act (passed annually)
DWAF	Department of Water Affairs and Forestry
DWS	Department of Water and Sanitation
EFF	Economic Freedom Fighters
EIU	Economist Intelligence Unit
EPEC	European PPP Expertise Centre

FBS	Free Basic Services
FF+	Freedom Front Plus
FFC	Financial and Fiscal Commission
GDP	Gross Domestic Product
GEAR	Growth, Employment and Redistribution
GTAC	Government Technical Advisory Centre
IDP	Integrated Development Plan
IEC	Independent Electoral Commission of South Africa
IFP	Inkatha Freedom Party
IMF	International Monetary Fund
KZN	KwaZulu-Natal
LGES	Local Government Equitable Share
LGTA	Local Government Transition Act, 1993 (Act 209 of 1993)
LGTAS	Local Government Turnaround Strategy
MDB	Municipal Demarcation Board
MEC	Member of the Provincial Executive Council
MFMA	Local Government: Municipal Finance Management Act, 2003 (Act 56 of 2003)
MIG	Municipal Infrastructure Grant
MISA	Municipal Infrastructure Support Agent
MLM	Midvaal Local Municipality
MOF	Ministry of Finance
MSA	Local Government: Municipal Systems Act, 2000 (Act 32 of 2000)
MTEF	Medium-Term Expenditure Framework
NA	National Assembly
NAO	National Audit Office (UK)
NCOP	National Council of Provinces
NDP	National Development Plan 2030
NDRC	National Development and Reform Commission (China)
NEA	Netherlands Enterprise Agency

NEDLAC	National Economic Development and Labour Council
NPC	National Planning Commission
NPM	New Public Management
NPS	New Public Service
NWA	National Water Act, 1998 (Act 36 of 1998)
OECD	Organisation for Economic Co-operation and Development
OFWAT	Office of Water Services (UK)
PA	Patriotic Alliance
PFI	Private Finance Initiative
PFMA	Public Finance Management Act, 1999 (Act 1 of 1999)
PPP	Public-Private Partnership
PSP	Private Sector Participation
RDP	Reconstruction and Development Programme
RSA	Republic of South Africa
RSCs	Regional Services Councils
SACP	South African Communist Party
SADC	Southern African Development Community
SALGA	South African Local Government Association
SAMWU	South African Municipal Workers Union
SANCO	South African National Civic Organisation
SDBIP	Service Delivery and Budget Implementation Plan
SMMEs	Small-, Medium- and Micro-Enterprises
StatsSA	Statistics South Africa
TCTA	Trans Caledon Tunnel Authority
TVR	Treasury's Views and Recommendations
UDM	United Democratic Movement
UK	United Kingdom
USA	United States of America
USAID	United States Agency for International Development
USDG	Urban Settlements Development Grant

WBG	World Bank Group
WEF	World Economic Fund
WSA	Water Services Act, 1997 (No.108 of 1997)
WWF	World Wide Fund for Nature

# 1. CHAPTER ONE: GENERAL INTRODUCTION AND RESEARCH METHODOLOGY

## 1.1 Introduction and background

Water is an important source of life. The World Economic Forum (WEF) Global Risk Report identifies water as a priority resource with the ability to cause serious threat at a global level compared to inter-state conflict (WEF 2015:8). Addressing access to water is paramount for sustainable human and economic development. Water provision to communities is guided by standards and regulations set up by governments across the world.

South Africa's water sector is governed by the Water Services Act, 1997 (Act 108 of 1997) (hereafter referred to as the WSA) and the National Water Act, 1998 (Act 36 of 1998) (hereafter referred to as the NWA). The Department of Water and Sanitation (DWS) has overall authority and responsibility for managing water resources in the country. Water resources management includes planning, development and conservation of water resources. Section 3(1) of the WSA asserts the citizens' rights to receive basic water and sanitation. Basic water supply at a minimum should afford citizens reliable supply and acceptable quality of water.

The DWS utilises institutions such as the Trans Caledon Tunnel Authority (TCTA) to undertake water infrastructure projects at a large scale (National Treasury 2021a:923). The TCTA is a special purpose vehicle executing large water infrastructure projects on behalf of the DWS. Water resource infrastructure in South Africa is financed from the national budget or borrowing by the TCTA. Water boards are intermediaries distributing raw and treated water to municipalities for reticulation to the final consumers or residents. In some instances, a municipality may appoint a water board to provide water reticulation to the final consumers. The water boards vary in the size of the budget and the extent of the geographic area served. The largest water board in South Africa is Rand Water followed by Umgeni Water, which is based in KwaZulu-Natal Province (hereafter referred to as KwaZulu-Natal). Rand Water supplies water in Gauteng Province (hereafter referred to as Gauteng), portions of Mpumalanga, Free State and North West provinces (Rand Water 2019:82). Rand Water services a smaller geographical area concentrated in Gauteng, but serves the largest population compared to other water boards. The



remaining water boards are Mhlathuze Water, Lepelle Northern Water, Amatola Water, Magalies Water, Bloem Water and Sedibeng Water.

Water services authorities (WSA) are municipalities designated to deliver water services to the final consumers within their area of jurisdiction. Section 156 of the Constitution of South Africa, 1996 (hereafter referred to as the Constitution) and Schedule 4 Part B of the Constitution set out the roles of local government and this includes water provision. Water provision is not assigned to all municipalities as functions are allocated between different categories of municipalities. For instance, Category B (local municipalities) and Category C (district municipalities) have distinct powers to minimise coordination failures. In some instances, district municipalities provide water services to the respective local municipalities. The South African Local Government Association (SALGA) notes that metropolitan municipalities are classified as Category A and are all authorised to provide water services (SALGA 2020:11). From the discussion above, national government is responsible for development of policies in the water sector, while municipalities are responsible for water treatment and final distribution to residents.

The study focusses on municipalities as water services authorities. As will be discussed in the succeeding section, municipalities face several challenges in providing water to residents due to a number of reasons. Key to this study are the water infrastructure backlogs, limited maintenance and insufficient investment in new water infrastructure. Municipalities attribute several reasons for the increasing backlogs, with funding constraints being the primary reason as will be discussed later in the chapter. In order to tackle the infrastructure backlogs and invest in new infrastructure, alternative sources of funding are required by municipalities. Options available to municipalities include transfers or grants from national government, long-term borrowing from financial institutions (including issuing bonds), own revenue sources (increasing service tariffs), outsourced water provision and entering into public-private partnerships (Financial and Fiscal Commission (FFC) 2019:206). Increased funding from national government is not feasible due to the fiscal pressure, and municipal borrowing is constrained due to low cash coverage of between one to three months (National Treasury 2018:3). The shrinking revenue base (increasing inability of the rate payers to settle bills) is posing a challenge to

municipalities to adequately fund new and maintain existing infrastructure from own revenue sources.

Municipalities have not fully explored the use of public private partnerships as an avenue to address water infrastructure backlogs and limited funding opportunities. The research critically evaluates the factors influencing public-private partnerships' adoption in water infrastructure projects. The 2019 Budget Review released by National Treasury observes the limited appetite for PPPs and alludes to the need to possibly review the PPP framework in the future (National Treasury 2019a:156), and this research will contribute to such a process.

## **1.2 Problem statement**

South Africa receives insufficient rainfall and is ranked number 30 on the driest countries worldwide list, with insufficient water resources to adequately meet water needs for its citizens (GreenCape 2017:14; National Treasury 2011:124). About 66 per cent of South African land faces semi-arid conditions receiving rainfall below the annual global average (Maphela & Cloete 2020:536). The Water Research Commission (WRC) contends that water resources in South Africa are at risk with a water supply deficit estimated to be 1 billion cubic metres of litres by 2035, assuming that no changes to current water demand occur (WRC 2018:8).

South Africa is facing massive backlogs in water infrastructure due to insufficient investment and maintenance (DWS 2018a:2). In addition, population growth and the rate of urbanisation are increasing at a faster pace than infrastructure investment and thereby perpetuating the existing backlogs. Nyenje, Foppen, Uhlenbrook, Kulabako and Muwanga (2010:6) note that rural-urban migration has led to an increase in urban settlers occupying un-serviced sites which impacts the delivery of reliable and quality water. Basic services are put under pressure due to urbanisation, and limited infrastructure investment has worsened the backlogs even further (FFC 2017:2).

The United Nations Conference on Trade and Development (UNCTAD) notes that urbanisation is a global phenomenon and has been increasing over time, for instance, in 2010, 51 per cent of the world's population lived in urban areas and this increased to 55.7 per cent by 2019 (UNCTAD 2020:63).

The rate of urbanisation in South Africa is not uniform across cities and provinces. Statistics South Africa (2020:17) highlights that the share of households from the total population per province is increasing in Gauteng, the Western Cape and North West as shown in **Table 1.1**.

Gauteng reflects an increase of 1 per cent in the proportion of households between the period 2016 to 2020 and this motivated the study to focus on Gauteng, as will be explained later. Household numbers are preferred as opposed to actual population figures because water services are not delivered to individuals but to households.

**Table 1.1: Proportion of households per province between 2016 and 2020**

Province	Proportion of households per province in 2016 (%)	Proportion of households per province in 2020 (%)	Change between 2016 and 2020 (%)
Gauteng	25,0	26,0	+1,0
KwaZulu-Natal	19,5	19,3	-0,2
Western Cape	11,6	11,8	+0,2
Eastern Cape	11,9	11,3	-0,6
Limpopo	10,1	9,8	-0,3
North West	6,8	6,9	+0,1
Mpumalanga	7,8	7,8	0
Free State	5,1	4,9	-0,2
Northern Cape	2,2	2,2	0

Source: Statistics South Africa (2020:17).

In terms of net migration (in-migrants less out-migrants), Statistics South Africa projects that for the period 2016 to 2021, Gauteng will have an increase in population by approximately 980 398 people followed by the Western Cape as reflected in

**Table 1.2.**

**Table 1.2: Estimated provincial migration trends, 2016-2021**

Province	Net migration 2016 to 2021
Gauteng	+980 398
KwaZulu-Natal	-88 163
Western Cape	+290 555
Eastern Cape	-322 957
Limpopo	-189 112
North West	+112 881
Mpumalanga	+61 034
Free State	-29 929
Northern Cape	+11 554

Source: StatsSA (2020:16).

Gauteng is experiencing the largest net migration and this places a burden on infrastructure resources in the province. Consequently, this high level of net migration will require additional investment in water infrastructure by municipalities to cater for the increasing population. The Eastern Cape is experiencing the highest net outflow of people to other provinces putting less pressure on the province's infrastructure.

### **1.2.1 Water infrastructure backlogs**

Quantifying the exact number of water backlogs and the investment required to address them has been a difficult task for government, given the rate of urbanisation and emergence of informal settlements. The DWS (2018:47) estimates that over a 10-year period, approximately R840 billion is required to invest in new infrastructure, maintenance of existing infrastructure, and upgrading infrastructure at both national

and local government. The DWS further estimates that the funding gap is R333 billion over the 10-year period (DWS 2018a:48; Slater 2017:1).

To address municipal water infrastructure backlogs in South Africa, the DWS estimates that R28 billion is required per annum (DWS 2017:64). For 2017, Palmer, Graham, Swilling, Robinson, Eales, Fisher-Jeffes, Kanser and Skeen ([sa]) estimate a shortfall of R38 billion for local government water infrastructure after accounting for grants from national government, borrowing and internally generated revenue. Palmer *et al.* ([sa]) estimate that the projected shortfall over a 10-year period is over R227 billion. It is suggested from studies cited above that the extent of water infrastructure deficit at the local government sphere is not precisely known, but what the studies have shown is that there is a definite need for investment in water infrastructure. Backlogs are estimated to range from R28 billion to R38 billion annually.

### 1.2.2 Backlogs in selected municipalities in Gauteng

Gauteng Province has 11 municipalities (3 metros, 6 local municipalities and 2 district municipalities). The 2 district municipalities are not water services authorities, that is, they are not authorised to provide water services to residents. The district municipalities coordinate integrated planning for infrastructure services. In Gauteng, in-dwelling access to piped water varies from 51 to 73 per cent across municipalities (**Table 1.3**) and the remainder access water from taps in the yard, community standpipes and tankers. Emfuleni Local Municipality (hereafter referred to as Emfuleni Municipality) has most of the households with piped water in-dwelling (73.3 percent) and Mogale City Municipality has the least with 51.9 per cent.

**Table 1.3: Water services authorities in Gauteng and access to piped water in dwelling**

Municipal Type	Municipality	Water services authority	Number of households	Households with piped water in dwelling (%)
Metropolitan Municipalities (metros)	City of Johannesburg	Yes	1 853 371	60.3
	City of Tshwane	Yes	1 136 877	62.1
	City of	Yes	1 299 490	56.5

Municipal Type	Municipality	Water services authority	Number of households	Households with piped water in dwelling (%)
	Ekurhuleni			
Local Municipalities	Emfuleni	Yes	253 488	73.3
	Lesedi	Yes	39 294	55.7
	Midvaal	Yes	38 046	62.0
	Merafong	Yes	79 834	62.1
	Mogale	Yes	147 153	51.9
	Rand West City	Yes	103 584	55.4
District Municipalities	Sedibeng	No water provision by the District Municipalities		
	West Rand			

Source: Statistics South Africa (2018:43); Local Government Handbook (2019:87-100).

The City of Johannesburg Metropolitan Municipality (COJ) estimates that its total infrastructure backlog is around R170 billion inclusive of water, bridges, roads and electricity (COJ 2019a:24). With respect to water, the COJ cited historical under-investment in water infrastructure as an impediment in addressing the water needs for all its residents. Joburg Water has an infrastructure renewal backlog of R5.8 billion and requires R12.65 billion in the next 10 years to replace critical assets that require refurbishment or replacement (COJ 2019b). The COJ managed to renew only 0,2 per cent of its water network per annum against a target of 2 per cent per annum and this resulted in the water bursts increasing to 33 856 in 2017/18 (COJ 2019a:24). Given the increase in water bursts, the COJ failed to meet its own target of responding to 95 per cent of water burst pipes within 48 hours and only managed to achieve an 89 per cent response rate. More than 25 600 households still require access to water in the COJ and this number is likely to increase if 296 000 households residing in informal settlements migrate to formal settlements (COJ 2019a:20).

The City of Ekurhuleni Metropolitan Municipality (COE) estimates that it has 324 749 households that require water provision, and this translates to 32 per cent of

households in the COE (COE 2018:42). The COE estimates that R10 billion is required to eradicate water backlogs, renew assets and cater for growth of the city over a 30-year horizon (COE 2018:42). The City of Tshwane's (COT) customer satisfaction showed that only 59 per cent of the residents are satisfied with the level of service. For water supply, a 69 per cent satisfaction level was achieved given the level of burst water pipes and time taken to respond to service down turns (COT 2018:53).

Despite having more households with access to water in dwelling, Emfuleni Local Municipality water systems are constrained by low water pressure, aging infrastructure and increase in water leakages resulting in loss of revenue. These challenges result in Emfuleni Local Municipality struggling to guarantee sufficient and reliable water supply to its residents. In this regard, substantial financial investment is required to upgrade the infrastructure and conduct proactive maintenance (South African Cities Network 2014:48; Emfuleni Local Municipality Integrated Development Plan 2019/2020:113). Emfuleni Local Municipality was placed under administration by the Gauteng Provincial Government in 2018 due to financial challenges and failure to provide minimum services to its residents.

The above discussion highlights the extent of water infrastructure backlogs in selected municipalities in Gauteng. Gauteng is the economic hub for South Africa with increasing urbanisation, which puts pressure on the existing infrastructure. Addressing water infrastructure backlogs will have a positive impact on the Gauteng economy.

### **1.2.3 Funding options for municipalities to address backlogs**

In order to tackle the infrastructure backlogs and invest in new infrastructure, alternative sources of funding are required by municipalities. Options available to municipalities include transfers or grants from national government, long-term borrowing from financial institutions (including issuing bonds), own revenue sources (increasing service tariffs), outsourced water provision and entering into public-private partnerships (FFC 2019:206).

The funding that is available to local government for infrastructure from national government is largely from the Municipal Infrastructure Grant (MIG) for local and district municipalities, and the Urban Settlement Development Grant (USDG) for the



metropolitan municipalities. The USDG is allocated to eight metropolitan municipalities as additional funding for infrastructure investment to support urban development. The MIG is allocated to the rest of the municipalities for infrastructure development. For the 2019/20 financial year, R27 billion was allocated to local government through the USDG and the MIG (National Treasury 2019a:39). These grants are used for water, sanitation, electricity, roads, storm water and human settlements, among others. National government funding of around R27 billion per year for all types of infrastructure (roads, storm water, water, electricity etc.) is not adequate to finance water backlogs estimated to be between R28 billion to R38 billion per year. In addition, more funding is still required for rehabilitation and investment of new water infrastructure to cater for new growth. Given the mismatch between funding available from national government and the funding required to eradicate water infrastructure backlogs, rehabilitation and new infrastructure investment, alternative sources of finance are required to address water needs.

Request or motivation for increased funding from national government is another option available to municipalities to finance water infrastructure. The South African Economic Reconstruction and Recovery Plan launched in October 2020 highlights the severity of the negative economic outlook for South Africa which resulted in a series of credit downgrades for both private and public entities impacting the ability of government to borrow for infrastructure investment (National Treasury 2021b:156; The Presidency 2020:2). Resource mobilisation in terms of financing is constrained by low levels of growth, under collection of taxes, rising budget deficit and increasing debt which limit the ability of government to increase funding for infrastructure (The Presidency 2020:2). The COVID-19 pandemic since early 2020 deepened the economic challenges and further limited the ability of the government to continue with planned infrastructure investment (National Treasury 2021b:156). Government was forced to prioritise social interventions as many people lost income.

A significant number of municipalities (approximately 60 per cent) receive more than 75 per cent of their revenue as infrastructure grants from national government (National Treasury 2018:24). The excessive reliance on national government grants is indicative of the constrained financial environment faced by most municipalities. The financial difficulty of state-owned companies arising from poor management, political interference and corruption has placed an additional burden on the national



fiscus, which resulted in reprioritisation of government expenditure. In the 2018 national budget, National Treasury reduced baseline expenditure to all spheres of government by R50.3 billion (National Treasury 2018:3). Given the limited funding from government, National Treasury proposed making changes to local government infrastructure grants to enable the full participation of the private sector (private financing) to support municipal infrastructure projects, and to improve operations and maintenance of the infrastructure (National Treasury 2019a:5). The suggested reforms on local government infrastructure grants are aimed at attracting funding from non-government entities for future investment in infrastructure. In addition, National Treasury recommends the creation of an infrastructure fund to be supported by development financial institutions, the private sector and multilateral development banks. The creation of this fund is an acknowledgement that government has limited funding to finance infrastructure across all spheres of government (National Treasury 2019a:5).

There is a misconception that local government has substantial unspent funds which can be used to deal with infrastructure backlogs (National Treasury 2018:46). The existence of “unspent capital budgets” at municipal level does not necessarily reflect that the unspent cash is “money in the bank”. National Treasury (2018:45) noted that in the 2018/19 financial year, 113 municipal councils approved budgets that were not funded (projected revenue was less than projected expenditure or budgets were based on unrealistic assumptions). As a result of unfunded budgets, at the implementation stage, projects will be slowed down due to cashflow problems. If the municipalities do not formally adjust their budgets accordingly, capital expenditure is then compared to budgeted amounts and will be reflected as unspent budget for audit purposes (National Treasury 2018:45).

Municipal own revenue is another funding source available to local government. In terms of revenue, different municipalities rely on different sources. District and rural municipalities rely mostly on grant funding and subsidies from the government, whereas metropolitan, large and small-town municipalities depend on own revenue from services such as electricity and water (Chitiga-Mabugu & Monkam 2013:4). The shrinking revenue base (increasing inability of the rate payers to settle bills) is posing a challenge to municipalities to adequately fund new and maintain existing infrastructure from own revenue sources. Declining revenue collection rates for

municipal services have been observed over time. For instance, 65 municipalities collected over 95 per cent of money owed by ratepayers in the first quarter of 2016/17, compared to 52 municipalities in the first quarter of 2018/19 (National Treasury 2019a:74). The unfavourable economic conditions in South Africa are contributing to the decline in collection rates, which limit funding available for infrastructure investment (National Treasury 2019a:74; Palmer *et al.* [sa]). National Treasury (2019a:74) estimates that municipalities are owed around R159 billion by rate payers of which R115 billion represents household debt, commercial customers (R26 billion), organs of state (R10 billion) and other (R8 billion). Equally, municipalities as at September 2018 had outstanding debts of R24 billion. Of the R24 billion, 53 per cent was owed to Eskom and 27 per cent owed to the water boards (National Treasury 2019a:73). This shows that municipalities are under financial pressure which limits their ability to deliver services based on predetermined outcomes and to cope with any adverse shocks to the economy (Chitiga-Mabugu & Monkam 2013:1). The harsh economic environment is constraining the ability of large cities to raise additional funding to finance infrastructure projects. Declining tariff collection levels and increasing debtors inhibit the potential for municipalities to raise additional revenue (FFC 2019:205; National Treasury 2019a:75).

Borrowing to finance infrastructure projects is allowed by the Local Government: Municipal Finance Management Act, 2003 (Act 53 of 2003) (hereafter referred to as the MFMA). The Financial and Fiscal Commission (FFC) notes that municipalities have not fully exploited borrowing due to some inherent risks such as poor financial management skills (FFC 2016:41), and borrowing has been declining since the financial crisis in 2008/9 (Chitiga-Mabugu & Monkam 2013:9). The debt-service-cost to own-revenue ratio of metros ranges between 4.4 and 9.4 per cent below the internationally acceptable ratio of 15 per cent (FFC 2019:226). Despite the low debt service-cost to own-revenue which may be suggestive of capacity for additional borrowing, the National Treasury (2018:12) indicated that 76 per cent of the municipalities have cash coverage of between one to three months (to cover operational expenditure) which is not ideal.

The above discussion points to limited options available for local government to deal with most of the water infrastructure challenges. Given the constrained fiscal

environment, national government will not be able to finance all local government requirements. Equally, municipalities' own revenue sources are limited as a result of poor payment levels by ratepayers due to economic hardships and a culture of non-payment. Long-term borrowing from financial institutions whilst still theoretically feasible is constrained by financial challenges faced by municipalities. Of all the options available to local government to finance water infrastructure, public-private partnerships are the least explored alternative, and the purpose of this research is to understand why PPPs are not seen as a viable alternative. The funding options are discussed in detail in **Section 4.5**.

### **1.3 South Africa's context to PPPs**

The regulatory framework for PPPs in South Africa enables municipal, provincial and national government to enter into PPP agreements. Municipal PPPs are governed by the Local Government: Municipal Structures Act, 1998 (Act 117 of 1998) (hereafter referred to as the MSA) and the MFMA. National Treasury in its Municipal Service Delivery and PPP Guidelines (2005:6) defines PPPs as:

*“... a contract between a municipality and a private party in which the private party assumes substantial financial, technical and operational risk in the design, financing, building and operation of a project”*

Compensation of the private party may take several forms and include direct payment for the delivery of the service or user charges collected by the private partner or a hybrid of these (Schomaker 2020:812). Municipalities are required to prove that the PPP deal is “affordable, value-for-money will be achieved, and that substantial technical, operational and financial risk is transferred to the private party” before approval is granted by the National Treasury (National Treasury 2005:7).

The exposure of the private partner to significant risk and performance-based remuneration is one of the reasons cited in support of PPPs (Opara & Rouse 2019:81; Harris 2003:20). The main benefits of PPPs are the capability of local government to prevent upfront and sunk costs and the completion of the project timeously and within budget due to the private partner's efficiency (Boardman, Siemiatycki & Vining 2016:1). With PPPs, municipalities budget for the compensation of the private partner (referred as unitary payments) or involve the private partner in collecting tariffs (Schomaker 2020:812; Maryouri 2013:210). Private partners are

known to use aggressive or punitive credit control processes with limited political interference and may achieve better collection levels (Boardman *et al.* 2016:9). Bender and Gibson (2010:45) reviewed the first 10 years of the Mbombela Local Municipality concession and concluded that the PPP improved the management of the water environment, water access and quality improved, and expenditure on government grants for infrastructure projects improved.

Despite some of the positive experiences of water PPPs in other countries, municipal PPPs in South Africa have been limited. The formal municipal PPP framework came with the promulgation of the MFMA in 2003. This was followed by PPP Guidelines issued in 2005 to guide the different spheres of government on the process to be followed in entering into PPP arrangements. PPPs for water services in South Africa's municipalities commenced before a formal PPP framework was put in place. PPPs in the water sector took the form of leases, management contracts and concession agreements as indicated in **Table 1.4**. Since the promulgation of municipal PPP guidelines in 2005, no concession agreements (which reflect the largest contribution of the private partner) have been entered into with the water sector by municipalities. Since inception of the municipal PPP guidelines in 2005, only a management contract by Maluti-a-Phofung Local Municipality was entered into in 2005. The City of Johannesburg's management contract was entered in 2001.

**Table 1.4: PPPs in the water sector in municipalities in South Africa**

Municipality	Type of Contract	Commencement and duration
Queenstown (now Lukhanji)	Lease	June 1992, for 25 years
Stutterheim (now Amahlati)	Lease	1993, for 10 years
Fort Beaufort (Nkonkobe)	Lease	1995, terminated in 2000
Dolphin Coast (now KwaDukuza)	Concession	January 1999, for 30 years
Nelspruit (now Mbombela)	Concession	April 1999, for 30 years
Johannesburg	Management Contract	April 2001, for 5 years
Maluti-a-Phofung	Management Contract	November 2005, for 6 years

Source: Marin (2009:5).

The study critically evaluates the constraining factors for public-private partnerships in water infrastructure projects and proposes a framework that will facilitate PPPs in water infrastructure projects in selected municipalities in Gauteng.

#### **1.4 Challenges faced by municipalities in water delivery**

The DWS (2018:20) identified additional constraining factors in efficient water delivery by municipalities and these included: lack of technical skills, institutional capacity and failure to maintain and manage water infrastructure assets. Van der Waldt, Fourie, Jordaan and Chitiga-Mabugu (2018:185) conducted a technical skills audit in municipalities and identified several systemic challenges. Skills development was not yielding positive results as reflected by increasing community protests. Investments in public infrastructure by the South African government is estimated to be R3 trillion in the past 20 years but the quality and pace of delivery has been substandard due to poor project planning at all levels of government (National Treasury 2018:3; DBSA 2012:79). At a local government sphere, National Treasury (2019b:38) observes that municipalities received R50.9 billion in conditional grants in the 2017/18 financial year and on average spent over 85 per cent of the allocated funds. Low expenditure on the conditional grants was attributed to challenges in the procurement process, poor project management, weak contract management, weak institutional capacity, and inadequate technical skills (Council for Scientific and Industrial Research (CSIR) 2007:13; DBSA 2012:79). Lawless (2015:6) observes that there were 20 engineers per 100 000 people in local government in 1994 and by 2015 there were only 4 engineers per 100 000 people. Furthermore it is pointed out that the number of municipalities with no civil engineers on their staff compliment has increased from 126 in 2005 to 202 in 2015. The implication is that service delivery is compromised due to fewer engineers.

The vacancy rate for engineers is estimated to be 57 per cent and there is an urgent need for more than 4 000 artisans and technicians in the water and energy sector (Energy and Water Sector Education and Training Authority (EWSETA) 2019:12). The EWSETA (2019:38) argues that the sector is reliant on a highly skilled labour force with limited supply due to skilled professionals migrating abroad, others retiring and a number preferring to work in urban areas. Government has also acknowledged the persistent poor performance of municipalities in terms of service delivery and several support interventions were put in place. Since 1996, several

capacity building programmes<sup>1</sup> were introduced to assist municipalities, but skills and capacity problems persist.

Key weaknesses still remain in the water sector and some of the issues are attributed to limited funding, poor revenue collection, lack of skills (technical, business skills), political interference and corruption (South African Human Rights Commission 2014:8). To address the funding gap and limited technical skills, municipalities are now encouraged to leverage private sector funding and skills (National Treasury 2019a:75). Public-private partnerships (PPPs) provide an avenue for infrastructure financing at local government sphere (Ruiters 2013:326; DBSA 2012:82; FFC 2019:232). A PPP formalises the contract between the private sector and a government entity for the provision of a public good or service. The private sector partner accumulates significant risk and management responsibility for the public good or service and compensation or reward is often linked to actual performance (World Bank Group 2014a:14).

### **1.5 Working definition of PPPs**

The concept of PPP appears straightforward, yet it has many facets, resulting in no universally accepted definition (Thiemann & Volberding 2017:8). Bovis (2015:200) describes PPPs “as a sophisticated interface between public authorities and private sector undertakings with an objective of delivering infrastructure projects, public goods and services”. PPPs integrate the private sector in service delivery beyond arms-length transactions of which both public and private entities have mutual interest for the success of the partnership (Boyer, Van Slyke & Rogers 2016:7; Lohmann & Rotzel 2014:6; Bovaird 2004:200). Other terms used to describe PPPs include private sector participation (PSP), private finance initiatives (PFIs), privatisation, private finance projects, private sector contracting, public alliance and non-profit partnership (Asian Development Bank 2008:2; Thiemann & Volberding 2017:8-9). PPPs are often distinguished from privatisation as privatisation entails the partial or full transfer of government assets to a private enterprise. Privatisation

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<sup>1</sup> Project Viability (1995); Project Consolidate (2004); Siyenza Manje Programme (2006); Local Government Turnaround Strategy (2010); Local Government Back to Basics Strategy (2016); District Development Model (2019).



means that the private sector is responsible for day-to-day production and the government will act as the regulator. Thus, in this study PPP is defined according to National Treasury (2005:6):

**“... a contract between a municipality and a private party in which the private party assumes substantial financial, technical and operational risk in the design, financing, building and operation of a project.”**

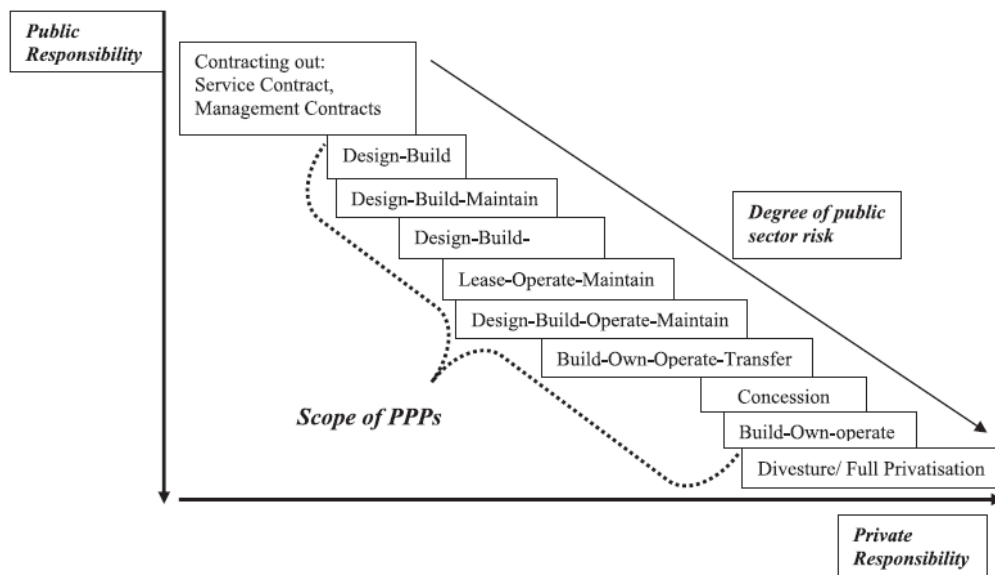
### **1.5.1 PPP contract types**

PPP contract types include the following: “service contracts; management contracts; lease contracts; build–operate–transfer (BOT) and similar arrangements; concessions; and joint ventures” (Ham & Koppenjan 2002:604). A service contract entails “the government hiring a private company or entity to carry out one or more specific tasks or services for a period, typically 1-3 years” (Fleta-Asin, Muñoz & Rosell-Martínez 2020:1514; Ham & Koppenjan 2002:604). A management contract involves daily management and operation of the public service by the private partner (Reynaers 2014:42). Under a lease contract, “the private partner is responsible for the service in its entirety and undertakes obligations relating to quality and service standards” whilst the government finances the infrastructure (Fleta-Asin *et al.* 2020:1514; Klijn & Koppenjan 2016:6). In concession agreements, “the private partner (concessionaire) is responsible for the full delivery of service” which includes raising funding, construction, operating, maintenance and management of the infrastructure. Under a concession agreement, the public sector’s position shifts to monitoring of the service and in some instances is involved in tariff setting (Forrer, Kee, Newcomer & Boyer 2010:475). There are many variations of concession agreements which include “build-operate-transfer (BOT), build-own-operate (BOO), design-build-operate (DBO), design-build-finance-operate (DBFO), design-build-finance-maintain-operate (DBFMO) and design-build (DB)” (Reynaers 2014:11).

Roehrich, Lewis and George (2014:112) also note that PPPs exhibit variations in practice depending on the risk appetite of both the public and private partners. Under a management agreement, public sector risk (or responsibility) is higher compared to a concession arrangement as illustrated in **Figure 1.1**.

PPPs can be undertaken for new assets (greenfield investment) and existing assets (brownfield investments). An example of new assets is the construction of water

infrastructure in a new area while brownfield investment can be replacement of portions of existing water infrastructure. The risk associated with new and existing assets differ as private investors can fully ascertain their exposure in brown field investments compared to greenfield investments (Roehrich *et al.* (2014:111)).



**Figure 1.1: PPPs responsibility matrix**

Source: Roehrich *et al.* (2014:111).

Given the varied scope of PPPs as discussed above, this study focusses on concession agreements including their several permutations. The reference to PPP uptake by municipalities is limited to the various permutations of concession agreements described above. The water infrastructure challenges articulated in the problem statement above provide an opportunity for PPPs (in the form of concession agreements) to deliver more lasting solutions compared to other forms of PPPs. The study seeks to uncover the factors influencing the use of PPPs by municipalities.

## 1.6 Significance of the study

The South African Economic Reconstruction and Recovery Plan (referred to hereafter as the Economic Recovery Plan) launched in October 2020 highlights the severity of the negative economic outlook for South Africa and attests to the need for infrastructure investment as a way of resuscitating the economy from the impact of the COVID-19 pandemic (The Presidency 2020:10). The Economic Recovery Plan advocates for the strengthening of private sector participation in infrastructure



delivery through the review of the public sector financial management legislation such as the Public Finance Management Act, 1999 (Act 1 of 1999) and the Local Government: Municipal Finance Management Act, 2003 (Act 56 of 2003) (referred to hereafter as the MFMA) to promote PPPs (The Presidency 2020:10). The Economic Recovery Plan elevates the role of PPPs in infrastructure investment and job creation.

National Treasury (2019:152) highlights that there are 34 projects currently funded by PPPs in South Africa. Of the 34 projects, only three are in local government, of which two are in the water and sanitation sector (Mbombela and KwaDukuza Local Municipalities) and one is in office accommodation (City of Tshwane). The local government sphere therefore represents only 9 per cent of the PPP projects. The bulk of the existing PPP projects are from national and provincial government, each with 45.5 per cent of the projects. The sectors funded by PPPs are office accommodation (7 projects), transport and roads (10), health facilities (8), tourism (4), water and sanitation (2), correctional services (1) and information technology (2).

Total planned public sector investment for the period 2019/20 to 2021/22 financial years amounts to R864.9 billion of which PPPs contribute R17.3 billion (or 2 per cent) (National Treasury 2019a:153). There is a general decline of PPP transactions, for instance, in 2011/12 the value of new PPP transactions was R10.7 billion and this declined to R4.8 billion in 2017/18. This indicates a slow uptake of PPPs in South Africa in general. Of the 22 PPP projects in the pipeline (feasibility and procurement phase), only seven projects are in local government and none of these projects focus on water infrastructure. The pipeline projects are targeted at transport (5), health (2), energy (1), office accommodation (7), solid waste (3), sanitation (2) and education (2) (National Treasury 2019a:155).

The factors contributing to the limited uptake of water infrastructure PPPs by municipalities have not been systematically studied, and this study seeks to make such a contribution. In South Africa, there are limited studies in water PPPs at local government sphere. Rubin (2007:3) conducted a study on the factors affecting PPPs in urban renewal and development projects in South Africa. The sample size was limited to one municipality and two government departments (not specified in the thesis due to ethical considerations). Maseko (2014:129) analysed PPP success

factors in South Africa focussing on the energy, transportation, mining and finance sectors. The study did not interview any stakeholder in the local government sphere.

Fourie and Schoeman (2005:30) investigated value-for-money in PPPs for HIV/AIDS intervention in South Africa. Fourie (2006:925) explored PPP utilisation in public financial management in South Africa and found that in order to establish successful PPPs there should be strict checks and balances and accounting officers should comply with the legislative frameworks. Fourie (2015:107) provided a perspective of how good governance interfaces with PPPs and concluded that public sector organisations that are responsive to change, encourage innovation, have strong customer focus and have transparency are likely to benefit from PPPs.

Minnie (2011) investigated the critical factors for successful PPPs. An exploratory research method was used firstly identifying the critical success factors from literature and secondly observing some additional factors from selected case studies around the world. The two most critical success factors identified for PPPs are: “(i) delivering a publicly needed service and (ii) achieving the objectives of the partnership”.

Other studies in South Africa evaluated the benefits of PPPs in water at local government sphere (Bender & Gibson 2010:45; Chetty & Luiz 2014:9-12; Martin & Sohail 2005:5-6; Marin 2009:21-25). These studies generally indicated that PPPs improved the management of the water environment, improved water access and quality, and utilisation of government grants improved.

Despite these studies done for general PPPs in South Africa, there is still limited research to understand the constraining factors for water infrastructure PPPs by municipalities. The studies done in South Africa broadly focus on PPP success factors and there is minimal reference to local government and water provision more specifically. Whilst there is a body of knowledge regarding the success factors for implementing PPPs, very little is available on the impediments of local government in implementing PPPs in general and particularly in the water sector. Internationally, PPPs at local government level are now attracting interest from researchers (Hodge & Greve 2010:13; Bel, Brown & Marques 2013:436), but the impeding factors for a PPP adoption at local government level are still receiving little attention, especially in

developing countries (Okwaro, Chepkwony & Boit 2017:41). This study focusses on this gap and proffers a comparison of the reasons identified by the municipalities with those from other stakeholders (National Treasury, financiers, Provincial Treasuries, independent PPP experts, and the National Department of Water and Sanitation). Thus, the study utilises the triangulation method to benefit from perspectives of various actors. In understanding these reasons, the study will also assess whether the municipal PPP framework in South Africa follows best practice, based on observations from international experience. Based on international best practice, the study proposes a municipal PPP regulatory framework that would address the shortcomings identified in the current framework.

None of the studies cited above explored the constraining factors for PPP adoption for water infrastructure projects in municipalities. Public choice theory has not yet been applied to South Africa's perspective of municipal PPPs. This study intends to contribute to filling this gap and expand the body of knowledge. The academic contribution in research may include empirical study, or experimental or theoretical components that could be integrated into one study (Phillips & Pugh 1994). Van der Waldt (2017:183) identifies several avenues in which research in the Public Administration discipline may be deemed to make an academic contribution. These include provision of conceptual clarity to existing theories, establishing new interdependencies among variables, spotting limitations to existing research to justify departure from an existing or established framework and testing a theory in new settings. It is within this context that the study seeks to propose a municipal PPP framework that responds to the impediments to PPP uptake uncovered in the study. The proposed framework will provide policy makers with practical challenges faced by municipalities in the process of adopting PPPs and provide an opportunity to refine the processes accordingly.

## **1.7 Research objectives and questions**

### **1.7.1 Research Objectives**

The objective of the research is to assess whether the promulgation of the Municipal PPP Regulations has influenced the uptake of PPPs in water infrastructure projects by selected Gauteng municipalities, namely the City of Johannesburg Metropolitan Municipality, the City of Tshwane Metropolitan Municipality, the City of Ekurhuleni

Metropolitan Municipality and the Midvaal Local Municipality. The study explores the factors that influenced this outcome. A revised PPP framework that is responsive to the needs of the municipal water sector is subsequently proposed.

In order to address these research objectives, the study aims at:

- 1.7.1.1 Contextualising the relevant theories and practices of PPPs in the context of public administration;
- 1.7.1.2 Determining the extent to which the regulatory framework governing municipal PPPs in South Africa compares to international best practice (comparative analysis). The aim is to identify any gaps and develop best practice;
- 1.7.1.3 Determining the extent to which the regulatory framework governing municipal PPPs in South Africa influences the adoption of water infrastructure projects in selected Gauteng municipalities;
- 1.7.1.4 Assessing the factors influencing the adoption of PPPs in water infrastructure in selected Gauteng municipalities; and
- 1.7.1.5 Developing a framework/model (based on best practice) that will facilitate the adoption of PPP projects in water infrastructure in selected Gauteng municipalities.

### **1.7.2 Research Question and sub-questions**

The overarching research problem aims at answering the following question:

***To what extent has the promulgation of the Municipal PPP Regulations promoted the adoption of PPPs in water infrastructure in selected Gauteng municipalities?***

In order to answer the overarching research question, the following sub-questions were explored:

- 1.7.2.1 What does the concept of PPPs mean in the context of public administration?
- 1.7.2.2 How does the regulatory framework governing municipal PPPs in South Africa compare to international best practice (comparative analysis) and which approach will be most suitable to address the gaps identified?

- 1.7.2.3 Does the regulatory framework for municipal PPPs in South Africa promote the adoption of PPPs in water infrastructure in selected Gauteng municipalities?
- 1.7.2.4 What are the factors that have contributed to the extent of the adoption of PPPs in water infrastructure projects by the selected Gauteng municipalities? and
- 1.7.2.5 How can a conceptual model be developed to enhance water infrastructure PPPs in selected Gauteng municipalities?

## **1.8 Theoretical framework**

Social science research involves understanding complex social behaviour, group dynamics and unique human settings resulting in researchers applying unique methods to study certain phenomena (Van der Waldt 2020:1). To guide them in understanding complex social behaviour, researchers develop a theoretical or conceptual framework. There is no agreement in literature on the relationship between a conceptual and a theoretical framework. Some scholars regard them as synonymous (Saunders, Gray, Tosey & Sadler-Smith 2015:36), others consider a conceptual framework to be broader than a theoretical framework (Ravitch & Riggan 2017:137), and still more classify a theoretical framework as a sub-sector of the conceptual framework (Kumar 2014:57). Irrespective of the definition of a conceptual and a theoretical framework, the researcher formulates a basic conceptual framework to show the research approach which assists in understanding the research design.

The next section highlights public choice theory as the key theory anchoring the research. The detailed discussion on the theoretical framework and the anchoring theory is presented in **Section 2.4**.

### **1.8.1 Public Administration, PPPs and Public Choice Theory**

Scholars distinguish “Public Administration (upper case P and A) as a discipline and public administration (lower case p and a) as various activities supporting the broad discipline of Public Administration” (Rutgers 2010:3). For instance, Rutgers (2010:3), defines Public Administration “as a field of study or the study of public administration while public administration is considered as an object of the study”. Zalmanovitch (2014:808) asserts that the identity of Public Administration should be viewed “as a

field of inquiry and not solely as a profession relying on a generic viewpoint”. Public Administration is therefore a social science utilised by elected officials to address problems faced by citizens. Van der Waldt (2017:2) defines “Public Administration as a multi-dimensional field of study involving various research traditions and approaches focussing on governmental, political, economic, technological, legal, social and cultural systems”.

Cloete (1998:85) posits Public Administration as largely involved in internal administrative processes of government which include generic administration functions, auxiliary activities, instrumental activities and line functions. Auxiliary functions include research, legal services and public relations, while instrumental functions involve personal (communication, decision-making) and interpersonal (provision of offices and other tools of the trade). Line functions or functional activities are groupings created based on occupations, for example, library services, nursing and engineering. The generic administrative processes entail the following functions: policy-making, organising, financing, staffing or personnel administration, control, procedures or work methods and management. Cloete (1998:85) justifies the use of the term generic to reflect that these functions are universally performed in all public sector institutions with some adaptations to suit the context of the public institution.

PPPs by their nature represent a form of strategic public procurement process (equivalent to a financing mechanism) in which the private partner takes significant risk by incurring upfront project costs and delivers public services on behalf of government (Roman 2015:1). Public procurement via PPPs fits into the financing function of Public Administration. PPPs at local government sphere fall under supply chain management provisions (Section 120 of the MFMA). Equally, procurement and implementation of PPPs must follow procedures and regulations which is another generic function of Public Administration. In South Africa, PPPs at local government level should comply with the Local Government: Municipal Systems Act, 2000 (Act 32 of 2000), the MFMA and the Municipal Service Delivery and PPP Guidelines of 2003. Section 46 of the MFMA provides a framework for raising funding by municipalities.

Given the private sector participation in the delivery of public services as a result of their perceived efficiency, the meta-theory or paradigm considered in this study is New Public Management (NPM). Several substantive theories are used to support NPM and these include principal agency theory, public choice theory, public good theory, among others (Van der Walt 2017:192-200). NPM meta-theory is chosen for the study due to the limited availability of funding by government to provide basic water services to the citizens. The traditional public management role which focussed on the generic administrative processes or functions of government would not be an appropriate meta-theory for the study. NPM meta-theory brought about “market-like mechanisms” championing the role of the private sector in the provision of public services. An additional factor which facilitated NPM was the financial crises (Thornhill & van Dijk 2010:104) which required alternative service delivery methods with existing budgets, in other words, doing more with less.

Van der Waldt (2017:192-200) provides a framework to assist in selecting theories to consider studying a defined phenomenon. The framework has 10 themes and for the purposes of this study only three themes are relevant: public service delivery, public policy and financial and supply chain management. Wang, Xiong, Wu and Zhu (2018:299) conducted a review of articles that focussed on PPPs and identified theories have been used to support the privatisation and private sector involvement in delivery of public services. The theories identified include transaction cost theory (14 per cent of the articles), principal agent theory (11 per cent), network-oriented perspective (11 per cent), new public management (8 per cent), institutionalist theory (8 per cent), governance theory (8 per cent), property rights theory (5 per cent), public choice theory (3 per cent), stakeholder theory (3 per cent) and organisational theory (3 per cent), among others. This is further explained in detail in **Section 2.4**.

Public choice theory (PCT) is the main theoretical framework that influenced the new public management reforms (Lukomska-Szarek & Wloka 2013:282; Aucoin 1990:115) and it is used as the anchoring theory for this study. Public choice theorists assert the view that economic incentives guide human action influenced by self-interest. The self-interest interferes with public interest, but more weight is placed on individual interest over public interest (Widmalm 2016:127). The PCT assumes that “any policy decision made by elected officials is underpinned by the expected reciprocal action by the voters” (Mizrahi 2004:277). The public choice



theory is anchored on the assumption that “the main interest (and, on occasion, the only interest) of politicians is to maximise their chances of being re-elected” (Owusu-Ansah, Ohemeng-Mensah, Abdulai & Obeng-Odoom 2018:941; Mizrahi 2004:277). Elected officials in general seek to maximise votes or political benefits (Owusu-Ansah *et al.* 2018:941; Lomasky 2012:327; Downs 1957:41) and in the context of PPPs, politicians may use PPPs to “garner political credit by delivering project benefits instantly, while transferring many of the government costs to the future” (Piano 2019:306). The behaviour of bureaucrats is influenced by the desire to maximise benefits which include remuneration, public reputation, power and dish out patronage to appointing authority (Erkoc 2013:9; Piano 2019:306; Niskanen 1968:293). Conversely, bureaucrats may not be willing to involve a private partner in infrastructure delivery due to perceived loss of power or influence.

Gawel (2011:4) argues that politicians play an important role in PPP solutions in a variety of ways: “(i) politically, first a decision is made on the institutional framework within which the public or private sector provision of goods is organised, (ii) the political system is a potential driver of PPP solutions, (iii) the relevance of the political system leads to expectations of very specific arrangements and results from the realisation of permitted PPP solutions”.

In South Africa’s municipalities, elected officials are councillors representing the residents and municipal officials are the bureaucrats. Councillors are responsible for policy direction, law making and oversight as prescribed in Section 160 of the Constitution. Municipal officials (the bureaucracy) focus on planning, policy implementation and administrative functions as determined by the Local Government: Municipal Structures Act, 1998 (Act 117 of 1998). Municipal councils are responsible for several functions, and of relevance to this study is the approval of the budget (including borrowing, entering into PPP arrangements, capital budget funding etc), approval of the service delivery plans and approvals of performance agreements. Equally, municipal administration functions as stipulated in the Constitution (Section 195) include efficient, economic and effective use of allocated resources, and fostering accountable government by attending to community needs. Bureaucrats tend to be better qualified and have the requisite skills compared to political leadership and citizens (Masiya, Davids & Mazenda 2019:29). Interested groups (voters or citizens) also play a role through community participation as



enshrined in Section 17 of the Local Government: Municipal Systems Act, 2000 (Act 32 of 2000) and should be afforded an opportunity to influence municipal decisions (Masiya *et al.* 2019:29) as public participation improves accountability and prevents mismanagement of service delivery expectations (Masiya *et al.* 2019:31).

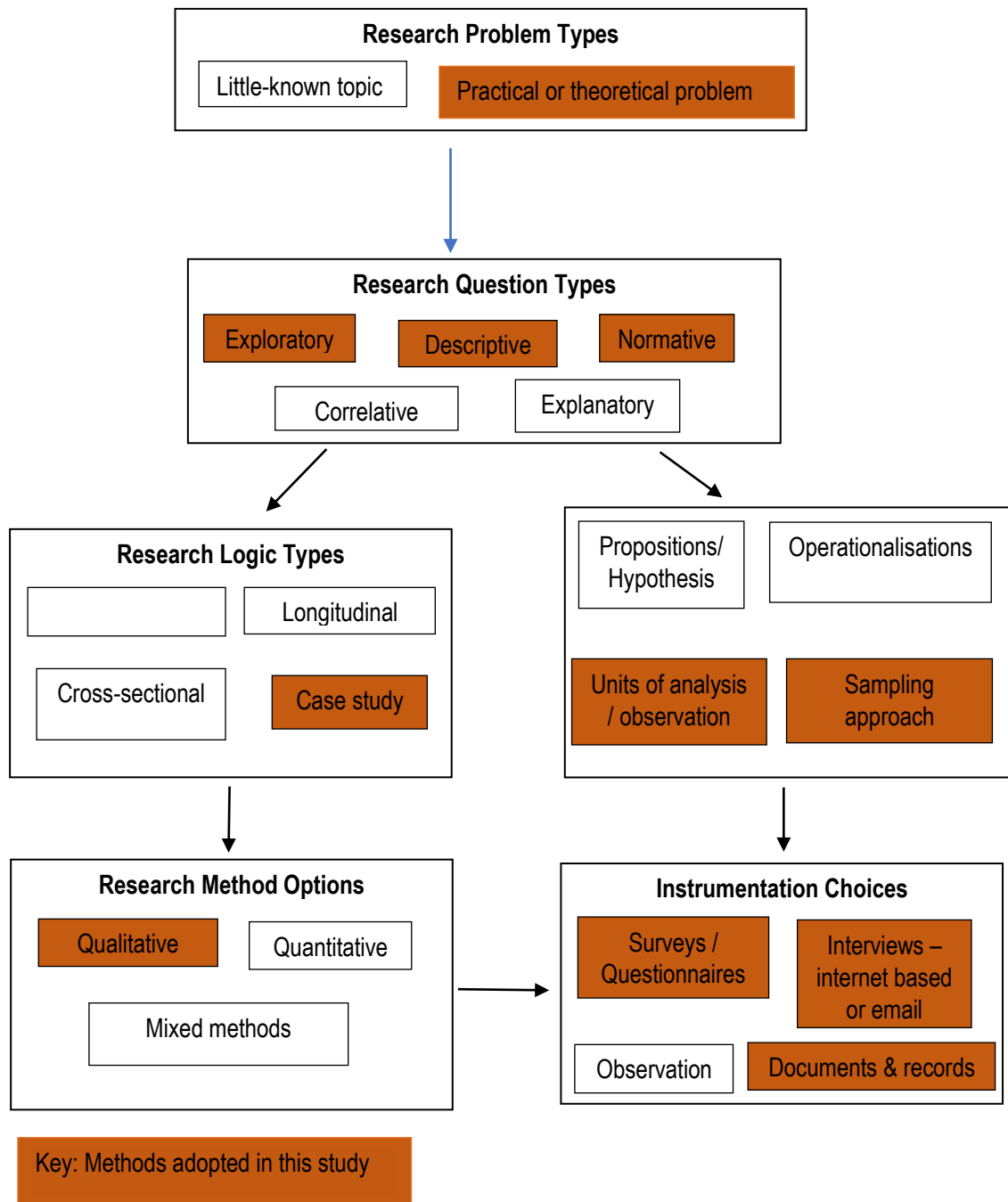
South Africa has limited studies in water PPPs at local government sphere. Some studies focussed on provincial and national government (Rubin 2007:3; Maseko 2014:1, Fourie & Schoeman 2005:30; Fourie 2006:925; Fourie 2015:107). Other studies evaluated the benefits of PPPs in water at local government sphere level (Bender & Gibson 2010:45; Chetty & Luiz 2014:9-12; Martin & Sohail 2005:5-6; Marin 2009:21-25). None of the studies explored the impeding factors for PPP adoption for water infrastructure projects in municipalities. Public choice theory has not yet been used (or tested) within the context of PPPs in South Africa's municipalities.

## **1.9 Research methodology**

The study utilised a qualitative case study design as discussed below.

### **1.9.1 Research design**

Research design is a broad phrase that denotes the process followed to facilitate the development of sound arguments in a logical structure with the ultimate goal being to provide both evidence and reasons that support a claim. Arguments have to be well-articulated and credible to convince a sceptical audience (Justice 2008:75). **Figure 1.2** provides a generalised research design highlighting the research problem, research questions, research logic, research method and other elements in the form of a hierarchy. Research problems inspire research questions which in turn inform the research logic and research methods to respond to those research questions. The actual sequence of this research design is not prescriptive but may be iterative and nonlinear to cater for various factors (Justice 2008:84).



**Figure 1.2: Hierarchy in research design**

Source: Author's formulation based on Justice (2008:75).

In line with the research design in **Figure 1.2** some of the stages applicable in conducting a qualitative case study include the following (Cunningham, Menter & Young 2017:926; Bhattacharjee 2012:96-97; Suryani 2008:120):

- a) researchers need to fully conceptualise the topic or study focus;

- b) researchers should select and underscore a specific phenomenon and determine the research questions;
- c) the research questions guide researchers in the method of data collection which may include interviews, observations or documents;
- d) researchers organise and classify data in an accessible format in order to decipher and explore any emerging patterns; and
- e) researchers' analysis of the emerging patterns forms part of triangulation of observations which is useful for data interpretation.

The expediency of the case study research contributes to the popularity of the qualitative research method, with some researchers defining case studies as a separate qualitative approach (Hyett, Kenny & Dickson-Swift 2014:1). Stake (2005:445-448) identifies “three different types of case studies, namely intrinsic case studies, instrumental case studies and multiple case studies or collective case studies”. An intrinsic case study focusses on inherent interests in order to explore deep insights of a specific case. An instrumental case study creates a base or foundation to enable the researcher to comprehend the primary issues under investigation. A multiple case study or collective case study, on the other hand, consists of several cases used to explore a specified phenomenon by noting all possible similarities or differences among the cases (Stake 2005:448; Yin 2003:32-33). Suryani (2008:118) notes that a collective study may be complex and involves exploring different dimensions such as a working environment, an organisational culture, or a defined region, such as a state, municipality or city.

The use of case study research is progressively a popular research design among qualitative researchers given its strength of capturing multiple dimensions in a real-life setting and “its focus in individual cases as opposed to methods of inquiry used” (Hyett *et al.* 2014:1-2). Case study research as part of qualitative research provides an in-depth understanding of real-life factors and offers insights that are often difficult to attain with numeric data, as data is collected from multiple sources (Yazan 2015:142; Creswell 2013:97; Yin 2013:321; Pratt 2009:856; Rynes & Gephart 2004:455). Case study designs scrutinise one or a few cases which allows for thorough analytical capability as opposed to statistical validity (Bhattacharjee

2012:93; Yin 2003:32-33). Yin (2014:63) argues that even one case study is sufficient to create valid data suitable for analysis. However, a positive relationship exists between the number of cases (multiple cases) and validity, that is, the larger the number of cases, the better the validity and robustness of the analysis. Multiple cases minimise direct replication compared to a phenomenon being studied under a single case study (Cog 2015:38).

Case studies provide detailed descriptions of how and why events occurred (Yin 2014:11; Bhattacharjee 2012:93; Rubin & Rubin 2004:22). Case studies therefore provide a broader contextualisation of the issues under study as the phenomenon of interest can be explored from multiple perspectives, multiple participants and utilising multiple levels of analysis (Yin 2014:11; Bhattacharjee 2012:93).

Compared to other qualitative approaches such as grounded theory or phenomenology, case studies offer a high level of flexibility and may be designed to suit the research question (Hyett *et al.* 2014:1). Suryani (2008:120) argues that case study qualitative research provides a complete interpretation of a phenomenon within a social context, without the need of manipulating the social settings. As a result, the data derived is representative of the actual phenomena in the respective society. Case studies in general are cost effective compared to experiments and surveys (Suryani 2008:120).

This study has four cases within Gauteng Province and therefore falls under multiple case studies. In line with the reasons advanced above and to provide in-depth analysis, the case study approach is chosen. The unit of analysis for this study will be limited to the selected four municipalities in Gauteng Province, namely the City of Johannesburg, the City of Tshwane, the City of Ekurhuleni and Midvaal Municipality.

### **1.9.2 Sampling**

It is not always possible or realistic to engage the whole population group when undertaking research and therefore a sample represents a portion of a population or universe to be considered in the study (Etikan, Musa & Alkassim 2016:2). In social science disciplines, including public administration research, the objective of sampling is to try and establish fairly accurate inferences about a phenomenon to a larger population (Rivera 2019:314). A chosen sample portrays and reflects the

population as far as possible (Rivera 2019:314). In this study, sampling was done on two fronts, firstly, the selection of the municipalities and secondly, selection of the interview participants in the selected municipalities.

Sampling can either be based on probability or non-probability. Probability sampling refers to randomly selecting a participant from a population of interest in such a way that each individual has an equal probability of being picked to be part of the study. Conversely, non-probability sampling occurs when the researcher decides upfront on the participants that will form part of the sample (Rivera 2019:316; Etikan, Musa & Alkassim 2016:1; Baker, Brick, Bates, Battaglia, Couper, Dever & Tourangeau 2013). Probability sampling limits bias due to random sampling and samples are perceived to provide fair estimates of the population group (Baker *et al.* 2013). Probability sampling is associated with high costs to the researchers and this has put a burden on government institutions which rely on surveys to gauge citizens' satisfaction about government services (Rivera 2019:316; Baker *et al.* 2013). As a result of the limited funding, government departments and agencies have now transitioned to using non-probability sampling techniques to generate some inferences about citizens' views about their services, as opposed to using traditional probabilistic methods (Rivera 2019:316).

Non-probabilistic sampling can be categorised in three forms, namely convenience sampling, purposive sampling, and sample matching (Rivera 2019:317). This study utilised convenience or purposive sampling. Convenience sampling relies on data collection from population members who are conveniently available to participate in the study (Etikan *et al.* 2016:2; Babbie 2010:193; Baker *et al.* 2013). Convenience sampling is also known as availability sampling or haphazard sampling. Purposive sampling is related to convenience sampling as it relies on the selection of participants on the basis of their individual qualities which include their ability to provide information related to the study (Etikan *et al.* 2016:2; Rivera 2019:319). Some of the factors considered by the researchers in the selection of the convenience and purposive sampling include (Etikan *et al.* 2016:2; Babbie 2010:193; Baker *et al.* 2013) the following:

- Practicality, for example, participant availability;
- Easy accessibility to participants;

- Geographical proximity; and
- Willingness to participate by informants.

Non-probability sampling is gathering momentum in its use, as more interviews or surveys are now being conducted via online platforms (Baker *et al.* 2013). Convenience sampling is characterised by lack of specific procedures used to decide on the study informants and makes it difficult to have a representative sample (Rivera 2019:319).

#### 1.9.2.1 Municipalities in the sample

Convenience or purposive sampling is suitable for this study due to limited funding and time to conduct a randomised study for all of the 257 municipalities in South Africa. As indicated before, Gauteng Province is experiencing rapid urbanisation and therefore more challenges are likely to be experienced by the municipalities in the province. In addition, practicality, proximity and easy access to participants were considered by the researcher. The researcher is based in Gauteng Province where all of the selected municipalities are located. Gauteng Province has 11 municipalities (three metros, six local municipalities and two district municipalities) as discussed in **Section 1.2** under Problem Statement. The two district municipalities are not water services authorities i.e. they do not provide water services to residents, and therefore did not form part of the sample. Out of the remaining nine municipalities that provide water services, the study focussed on all of the three metros (the City of Johannesburg, the City of Tshwane and the City of Ekurhuleni) and Midvaal Local Municipality. Midvaal Local Municipality was chosen because it is governed by an opposition party, the Democratic Alliance, and this enriched the study by exploring whether political affiliation influenced municipal choices. Midvaal Local Municipality was also selected as it has the least number of households in Gauteng and enabled exploring whether the size of the municipality impacts or hinders the uptake of PPPs. Permission letters to conduct the study in the four municipalities are provided in **Annexure 3**.

Gauteng municipalities are among the better resourced municipalities with technical skills and where there are gaps, they have capacity to contract third parties to manage the contracts. However, their slow or non-participation in water PPPs provided some perspectives on the challenges experienced by other metros and less

resourced municipalities. Given the chosen sampling technique it was difficult to generalise the findings, although useful insights were drawn from the experiences of the sampled municipalities.

#### 1.9.2.2 Interview participants

The MSA, the MFMA and the Municipal Service Delivery and PPP Guidelines (2003) govern the municipal PPP arrangements. Sections 46 and 120 of the MFMA provide a framework for raising funding by municipalities and the process to be followed for entering into PPPs. Specific responsibilities of municipal officials and council in raising funding are articulated in the pieces of legislation cited above.

There are several actors involved in municipal PPPs during the lifecycle of the PPP agreement. These stakeholders include National Treasury, respective provincial treasuries, municipalities, the Department of Water and Sanitation for water specific projects, the Department of Cooperative Government and Traditional Affairs, financiers and independent advisors, among others. In this study, the respondents were selected based on their technical expertise on funding and water infrastructure skills in their respective municipalities. The respondents were selected through purposive sampling and included senior officials in the following operational areas: finance, capital budgeting and water infrastructure services. Several stakeholders within the water sector, policy makers, independent experts and those involved in the PPP approval process were interviewed, making triangulation of results possible.

Triangulation is a useful method to support case study research design (Cunningham *et al.* 2017:926; Yin 2013:322; Adelman, Kemmis & Jenkins 1980:47). Triangulation involves the use of multiple external data sources arising from a similar event to improve the integrity and reliability of the study results (Denzin 2017:11). Triangulation allows researchers to consider different perspectives on a phenomenon under study by using several methods or sources (Natow 2020:161; Flick 2017:53). Triangulation is useful to demonstrate concurrent validity in qualitative research as it minimises the bias of the researcher. Furthermore, triangulation improves analytical robustness and increases confidence in the findings (Azungah 2018:389; Turner, Cardinal & Burton 2017:244). Triangulation takes several forms (Fusch, Fusch & Ness 2018:22; Yin 2013:324; Flick 2017:53; Patton 2002:556-63; Denzin 1970:330):



- data triangulation (combination of various data sources);
- time triangulation (observations over time);
- space triangulation or perspective triangulation (observation over different places, countries or cultures);
- theoretical or theory triangulation (approaching data with alternative or competing hypothesis theories);
- investigator triangulation (use of more than one researcher in an investigation); and
- methods triangulation (“use of either the same method on different occasions or different methods on the same object”). For example, data can be triangulated from interviews, focus groups and observations, among others.

Yin (2013:324) highlights that the methodological triangulation identifies “within methods triangulation and ‘between methods’ triangulation”. Between methods triangulation combines qualitative or quantitative research methods. For the purposes of this study, “within methods” triangulation was utilised, i.e. triangulation within the qualitative research design. Triangulation has its own limitations like any other method and these are discussed in **Section 1.10** under limitations.

The minimum sample size of 24 respondents was approved by the University’s Research Ethics Committee. Given the dynamic nature of the interview process and the quest by the researcher to follow up on vital information provided by the participants, the minimum sample was exceeded which enriched the study. For instance, the researcher interviewed five participants from National Treasury given their different roles in the municipal PPP process. Equally, the researcher learnt about how the different types of financial institutions play a role in funding infrastructure projects. Some financial institutions directly fund projects while others fund a consortium that is involved in a PPP project. To cater for the differences the researcher had to increase the interview participants. The researcher managed to reach out and interviewed a renowned international PPP expert who has advised many governments across the world on all continents. The international expert managed to shed light on the global perspectives of municipal water infrastructure



PPPs. The international expert has knowledge of the South African municipal environment having stayed in South Africa and has done some consulting work in South Africa. **Table 1.5** provides a summary of the interviews conducted compared to the minimum sample approved by the University's Research Ethics Committee.

**Table 1.5: Summary of the interviews conducted by stakeholder group.**

Stakeholder group	Stakeholder	Ethics approval minimum sample	Final study sample
Municipalities	City of Johannesburg	3	3
	City of Tshwane	3	4
	City of Ekurhuleni	3	3
	Midvaal Municipality	3	3
Private Sector	Financial Institutions	2	4
	PPP experts	2	2
	Water sector specialist	-	1
National and Provincial Government Departments	National Treasury	3	5
	Department of Water and Sanitation	2	3
	Provincial Treasury	1	1
	South African Local Government Association (SALGA)	1	1
	Department of Cooperative Governance	1	1
<b>Total</b>		<b>24</b>	<b>31</b>

Source: Author's own adaptation.

After establishing the relevant institutions to interview, the next step was to identify the appropriate officials in the institutions based on their respective roles. As indicated above, purposive sampling was used to identify research participants. The research participants were selected based on their expertise in their respective institutions. The researcher utilised various ways to identify the interviewees including using organisational structures, annual reports, council submissions, LinkedIn profiles and also a snowball sampling technique. The researcher previously worked for the City of Johannesburg (more than 12 years ago) and National Treasury (nine years ago) and utilised some of the contacts to obtain relevant people to interview. A lot of personnel changes occurred at these two institutions and the researcher had never worked with the interviewees before. This was important to deal with any research bias.

For instance, in municipalities, senior managers in the water services department were identified as most relevant, as were senior managers in the finance department responsible for funding and raising capital for municipal infrastructure projects. The motivation for the selection of participants based on their specific roles in relation to PPPs is presented in **Table 1.6**.

**Table 1.6: Motivation for the selected participants**

Stakeholder	Specific roles in PPP project cycle
Senior Managers in the finance department	The office of the Chief Finance Officer (CFO) is responsible for budgeting which includes raising funding for capital projects. The CFO is supported by several senior managers responsible for budgeting, financial reporting and treasury functions. PPPs involve complex financial negotiations and getting information from CFOs or senior managers in the CFO's office regarding the use of PPPs to fund water infrastructure projects. Their views on funding alternatives and hesitance to take up PPPs added value to the study.
Municipal managers or senior managers in the infrastructure departments	The municipal manager is the accounting officer and is ultimately held accountable for service delivery within the municipality. The municipal manager achieves this goal through senior managers in the respective infrastructure departments such as water and sanitation. The study

Stakeholder	Specific roles in PPP project cycle
(water and sanitation)	established the water and sanitation senior manager's perspective on the uptake of PPPs in the water sector and reasons thereof.
National and Provincial Government Departments (National Treasury, Provincial Treasury, Department of Cooperative Governance, Department of Water and Sanitation)	National and Provincial Government Departments have specific roles, for instance, the treasuries are responsible for advising municipalities on PPP projects and approvals thereof. Given their expertise and experience in evaluating projects, questions focussed on impediments faced by local government in considering PPP projects. The Department of Water and Sanitation is the policy maker in the water sector and the Department of Cooperative Government and Traditional Affairs is the custodian of local government matters.
Transaction advisors or project officers and independent PPP advisors	PPPs are managed by transaction advisory teams composed of legal advisors, financial advisors and engineers, among others. Experience and expertise of the advisors were crucial to understand the factors influencing water infrastructure PPP adoption by municipal officials.
Financial institutions	Financial institutions provide funding for the infrastructure projects either as equity or loans to the consortium of private partners. Financial institutions' perspective on factors affecting the adoption of PPPs by local government enhanced the study.

Source: Author's own adaptation.

In addition to purposive sampling, a snowball technique (chain-referral sampling) was used, in that the identified research participants provided additional names that the researcher could contact (Sharma 2017:752). Snowball sampling enhanced the responsiveness to the researcher's emails in instances where there was no acknowledgement of the email correspondence and telephone calls. Snowball sampling proved to be effective in municipalities and other government departments where there was no obvious contact list of participants in which the researcher was interested (Sharma 2017:752).

Snowball sampling has a unique disadvantage of introducing bias and unrepresentativeness given the likely association or social connections of the

interviewees (Etikan *et al.* 2016:1). In one of the municipalities, the researcher was provided a senior official to be the contact person for the study. The senior official provided a list of potential participants and two of the officials reported to this senior official. Based on public documents, the researcher had identified other contacts within the municipality who would be beneficial to the study and approached them directly. A similar challenge arose with two national government departments that provided the researcher with three potential participants each. Of the six recommended participants from the two national government departments, the researcher had already contacted two of the participants (one from each department). The researcher only used one participant from the recommended list. The actions by the researcher demonstrate mechanisms to mitigate bias from chain referrals or snowballing. Snowballing impacted the manner in which the researcher presented findings to protect the identity of the interviewees as explained in **Section 5.3**.

### **1.9.3 Instruments**

Interviews and self-completed questionnaires were used to gather information from selected participants in the selected municipalities, the private sector and other government stakeholders and policy makers. A sample of the main instrument used for municipalities is provided in **Annexure 4**. The instrument for the private sector and government was altered slightly to suit the stakeholder, while retaining the same broad themes. The interviews were conducted in Gauteng Province from December 2020 to March 2021. Two pilot studies were conducted in order to test the instrument for clarity, question flow and appropriateness of the questions. Pilot interviews were important in that the researcher became aware of the areas that required further probing, and that some questions required refinement and others needed to be rephrased completely. An important objective was to ensure that each interview was concluded within an hour and this resulted in focussing on the key questions first and then migrating to other questions necessary to reinforce the answers provided. The pilot interviews provided a way for the researcher to rephrase the questions to suit the interviewee's experience and expertise, whilst at the same time not altering the core themes and sequence of the research instrument.

Given the difficulty in accessing all the respondents for one-on-one interviews as a result of the COVID-19 pandemic, interviews were primarily conducted through an

online platform (Microsoft Teams). This approach made organising interviews relatively easier as there was no travelling involved and some participants preferred the sessions to be conducted after working hours or even on weekends. Upon agreement with the interviewees, the discussions were recorded and transcribed to enable further analysis. The questions were open-ended to allow respondents to elaborate based on their experience. The interviews were scheduled for between 45 to 60 minutes.

Self-completed questionnaires (SCQ) were utilised as a secondary instrument, only in instances where the participants were not available to conduct the interviews via online platforms. The same questions were posed in a similar sequence for both SCQ and online platform interviews in a process referred to as standardisation and scheduling (Phellas, Bloch & Seale 2011:183). This approach yielded uniform information to enable comparability of the data, as well as to establish some logical flow of information (Kraai, Holtzhausen & Malan 2017:68). The SCQs also had open-ended questions and only three (3) participants utilised this option. SCQs distributed via email have some benefits which include (Phellas *et al.* 2011:184):

- affordable to administer as there are limited costs incurred such as printing and travel;
- provide an opportunity to cover a wider geographical area and benefit from input from dispersed populations given that they are distributed via electronic methods;
- SCQs minimise bias as a result of the attributes of the interviewer. The potential variability of the interviewers' skills when dealing with different participants is minimised; and
- there is an increased perception of anonymity for the respondent when utilising SCQs which improves the validity of the responses.

SCQs have some limitations which are outlined in the limitations section (Section 1.10).

#### **1.9.4 Content analysis or documentary review**

Documentary review in social science research involves the analysis of documents that contain information about the phenomenon and is used to support or validate research findings (Natow 2020:170). Qualitative content analysis or documentary review is used to analyse text data from various sources and the text may take various forms such as verbal, print or electronic forms (Hsieh & Shannon 2005:1278). The sources of the text data include verbal responses, organisational documents, manuals, background papers, discussion documents, memoranda, newspapers, survey data, interviews, institutional documents, focus group discussions and print and electronic media such as articles or books (Bowen 2009:27-28; Hsieh & Shannon 2005:1278). Document analysis is predominantly relevant to qualitative case studies as it has the potential of generating rich descriptions of a single phenomenon (Bowen 2009:29; Stake 2005:448; Yin 2003:32-33).

Content analysis or document analysis provides the researcher with a structured method to “quantify the contents of a qualitative text” and is useful if “used in combination with other qualitative research methods as a way of validating the findings” (Bowen 2009:28; Cameron & McLaverty 2008:78; Mayring 2004:266).

Bowen (2009:29) highlights a number of specific ways in which documents are useful which include the following:

- Documents provide context, background information and historical insights which are useful for the researcher to develop some perspectives;
- Documents assist the researcher in suggesting further questions and placing the research in context;
- Supplementary and secondary research data may be obtained from documentary review;
- Tracking developments and changes are easier as various drafts of documents are readily available; and
- Verification of findings by corroboration of evidence is possible through the use of document analysis.

Document analysis was selected as an additional research method in this study because documents are readily available, cost-effective, efficient, and documents are not influenced by the researcher's scope, good coverage and are stable (reviews can be repeated over time) (Bowen 2009:31).

The evaluation of whether the PPP framework in South Africa conforms to best practice was based on documentary review. Three countries with similar developmental characteristics to South Africa were selected and one country with established practice in PPPs was identified. Countries selected with similar developmental characteristics to South Africa are China, Brazil and Mexico. The United Kingdom (UK), specifically England and Wales, were selected to represent the countries with well-established practices of PPPs.

Key documents consulted in this study include among others: the World Bank PPP toolkit including benchmark reports for PPPs in other countries; previous studies done on PPPs in South Africa, the National Treasury PPP Framework for Local Government; the National Treasury PPP Framework for Provincial and National Government, municipal approved budgets, integrated development plans and approved budgets for Midvaal Local Municipality, the City of Johannesburg, the City of Tshwane, the City of Ekurhuleni and Statistics South Africa.

## **1.10 Limitations**

### *Case study approach*

The study used a case study approach which has its shortcomings. Cunningham *et al.* (2017:926) argue that case study qualitative research does not follow systematic procedures and has poor designs leading to bias which impacts the findings and conclusions. The researcher's bias plays a part, but this may be minimised by triangulating the data to ensure that all claims are substantiated (Suryani 2008:121). Case studies provide limited evidence to present a scientific generalisation of the results and therefore the results largely apply only to the context covered in the cases (Yin 2013:325; Bhattacharjee 2012:93; Suryani 2008:121). While multiple case studies may remedy this shortcoming, a significant number would be required as case studies in most cases represent a fraction of the population (Cunningham *et al.* 2017:926; Yin 2013:322; Suryani 2008:121). Yin (2013:325) argues that

increasing the number of case studies may compromise the in-depth and contextual insights associated with case studies.

Case studies often rely on subjective data, based on individual experiences of participants and researchers' bias or worldview, and as a result data has large variability based upon participants' opinion and emotion (Fusch *et al.* 2018:19; Yin 2013:322; Bhattacharjee 2012:93). In qualitative research, researchers bring in their personal views, experiences, value system and opinions, which introduces bias to the research (Fusch *et al.* 2018:19). Bhattacharjee (2012:93) argues that case studies have no experimental control and therefore the inferences established lack internal validity.

### *Sampling*

The sampling technique chosen for the study is convenience or purposive sampling which is characterised by lack of specific procedures used to decide on the study informants and makes it difficult to have a representative sample (Rivera 2019:319). The results generated may not be representative to the population and therefore are less generalised. The use of SCQs has some limitations in that there is no opportunity to probe further, and the researcher is not always confident that the right person completed the questionnaire or senior officials might delegate to junior officials. In addition, response rates tend to be low therefore negatively impacting the credibility of the research (Phellas *et al.* 2011:184).

### *Triangulation*

As previously discussed, the study utilised "within-methods" triangulation (within the qualitative research design) as various stakeholders at municipal level, financiers and policy makers among others were interviewed. Triangulation has its own limitations like any other method. The drawbacks of triangulation include the following (Kern 2018:167-168; Thurmond 2001:256; Patton 1980:77; Fielding & Fielding 1986:27):

- Multiple qualitative data sources do not always ensure consistency or replication;



- Methodological triangulation does not necessarily increase validity, reduce bias or bring objectivity to research;
- Time consuming compared to the use of a single research strategy;
- Increased difficulty of dealing with a large array of data from multiple sources; and
- Multiple data sources have potential to introduce researcher bias if the data has disharmony.

Despite some of the critiques of triangulation, the study utilised this method to enrich some of the responses from interviewees.

### *Document analysis*

Document analysis is not always advantageous. A number of limitations are inherent in the use of documentary review and include the following:

- There is built-in bias by the researcher of isolating pieces of information from their context, given the limitation of the researcher not fully comprehending the context (Cameron 2008:78; McNabb 2002:414-416);
- Potential for documents to provide scant and insufficient details is heightened as the documents were produced for a specific purpose other than as an aid to the study (Bowen 2009:31); and
- Documents produced in an organisational or institutional context respond to the organisational policies and the researcher may not fully contextualise the environment and therefore unintentionally become biased (Bowen 2009:32).

The formal PPP framework came into effect in 2003 with the promulgation of the MFMA. From 2003 to date, there are external factors that impacted the financial markets which might have influenced the uptake of PPPs. The financial crisis in 2008 heightened risks for local government to engage in long-term commitments. To this end, the study did not directly consider the impact of these external factors unless the respondents raised such factors.

### 1.11 Ethical considerations

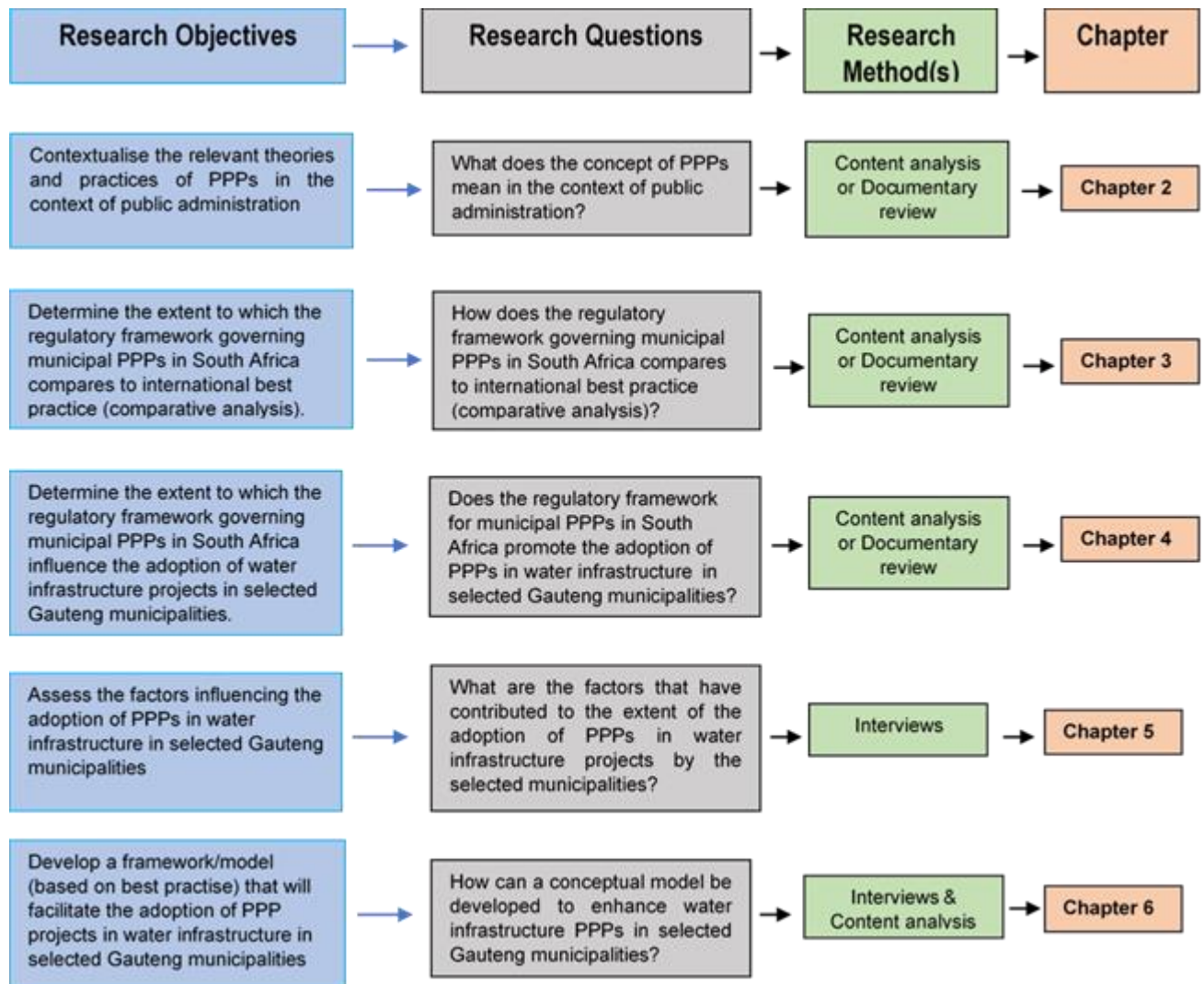
Qualitative research involves collection of data from human subjects, hence the participants' rights with regard to their identities and confidentiality need to be respected. The right of a participant not to respond to specific questions during the interviews was guaranteed. Confidentiality was extended to all participants to ensure honesty in answering the questions. Flick (2015:604) highlights that research ethics, informed consent and ethics committee review processes are imperative in making research smoother, safer and to ensure that researchers are accountable to the research participants. The consent form was sent via email to all the participants to append their signature before the commencement of interviews. The same procedure was followed for self-completed questionnaires and signed consent form was received together with the responses. The consent form signed by all interview participants is reflected in **Annexure 5**.

In light of the above, and to solicit honest feedback, the respondents were assured of confidentiality with respect to their responses. Before commencement of the study an ethical clearance from the University was obtained in line with the guidelines of ethical research as reflected in **Annexure 2**.

### 1.12 Chapter outline

Chapter 1 introduced the study and provided background to South Africa's water sector. In addition, the chapter outlined the motivation for undertaking the study, set out the research questions and objectives, highlighted the methodology used to undertake the study, articulated the significance of the study and presented the high level theoretical framework.

The subsequent chapters are summarised in **Figure 1.3** linking the research objectives, research questions and methods. The corresponding detail for each chapter is presented thereafter.



**Figure 1.3: Chapter outline linked to research objectives, questions and methods**

Source: Researcher.

Chapter 2 contextualises PPPs within public administration literature and provides a discussion on the role of the state, the mandate of local government, the theoretical framework for private sector participation and the types of partnerships. In addition, this chapter provides theoretical and empirical motivation for the use of PPPs including the relevant theories applicable to PPPs such as public choice theory, principal agent theory and stakeholder theory. For the purpose of this study, the main paradigm is New Public Management and the relevant theory explored is public choice theory.

Chapter 3 analyses the PPP regulatory frameworks for China, Brazil, Mexico and the United Kingdom. The international review provides a benchmark to South Africa's PPP framework. The United Kingdom is selected given its long history of PPP implementation in water infrastructure. China, Brazil and Mexico are chosen based on similar developmental characteristics with South Africa. The analysis of the PPP regulatory framework encompasses laws, regulations and policies dealing with PPPs in general and water sector reforms that necessitated increased uptake of water infrastructure PPP projects.

Chapter 4 provides an overview of funding options for municipal infrastructure in South Africa. Funding options include municipal infrastructure grants, long-term borrowings, municipal own revenue sources and bonds. Furthermore, the chapter describes the institutional arrangements in the water sector and the legislative framework applicable to local government in South Africa. Lastly, the chapter analyses the municipal PPP regulatory framework in South Africa and benchmarks it with international best practice. The purpose is to identify gaps in the regulatory set-up for PPPs in South Africa and propose a new framework which mirrors best practice.

Chapter 5 analyses and interprets the underlying factors influencing the uptake of water infrastructure PPPs in selected municipalities. The chapter begins by providing an overview of Gauteng Province and the socio-economic conditions of the four selected municipalities. The factors influencing municipal water PPP uptake are analysed from the perspective of all of the selected participants such as municipalities, independent PPP experts, the Gauteng Provincial Treasury, National Treasury, the National Department of Water and Sanitation, the National Department of Cooperative Governance and Traditional Affairs and private sector actors.

Chapter 6 summarises the findings and provides recommendations and a general conclusion. Areas of future research are suggested based on the limitations of the study.

### **1.13 Conclusion**

The purpose of this chapter was to introduce the study, its focus and objectives. The chapter commenced by providing the background to the water sector in South Africa and the institutional arrangements guiding the water sector. The problem statement

identified the challenges in the municipal water sector with specific focus on the Gauteng municipalities. The problem statement identified limited funding options available to deal with water backlogs in the selected municipalities. The problem statement subsequently led to the formulation of the research objectives which sought to assess whether the promulgation of the Municipal PPP Regulations has influenced the uptake of PPPs in water infrastructure. The chapter also introduced the theoretical framework anchoring the study. In addition the chapter discussed the research methodology which was a qualitative case study approach and content analysis and highlighted some of the limitations in the research methodology. Ethical considerations were discussed and the chapter concluded by providing a chapter outline for the entire study.

## **2. CHAPTER TWO: CONTEXTUALISING PUBLIC-PRIVATE PARTNERSHIPS WITHIN PUBLIC ADMINISTRATION**

### **2.1 Introduction**

Public-private partnerships (PPPs) are an emerging financing mechanism for infrastructure projects given the constraints to government finances and the inability of the municipalities to increase their borrowing due to poor credit worthiness. PPPs in a simplistic form involve the private sector delivering public goods and services for a fee. The success of PPPs in other countries has led governments across the world to explore PPPs as an alternative funding instrument for infrastructure projects. Government is plagued with infrastructure backlogs and the rapid urbanisation exacerbates the challenge. The advent of PPPs as an alternative funding mechanism has necessitated the need to establish how PPPs can be used in water infrastructure investment at municipal level. Given this context, the study sought to investigate factors influencing the adoption of PPPs in the water sector in selected municipalities in South Africa.

Against this background, this chapter firstly contextualises PPPs within the Public Administration discipline and public administration as a practice. A discussion of the pillars of Public Administration is undertaken to position PPPs within the relevant pillar(s). Secondly, this chapter traces the developments in Public Administration paradigms. The main paradigms analysed include “Traditional Public Administration, New Public Administration, Public Management, New Public Management, New Public Governance, and New Public Service”. New Public Management (NPM) will be explored in detail as its principles support the use of PPPs.

Thirdly, this chapter outlines the role of the state and the mandate of local government. In addition, the different mechanisms that the private sector utilises in providing public services are outlined, that is, various facets of PPPs. Fourthly, the chapter will provide theoretical and empirical motivation for the use of PPPs. The theories that underpin PPPs are discussed and public choice and principal agent theories are used to anchor this study.

#### **2.1.1 Contextualisation of Public Administration and its pillars**

This section provides some context to (P) public (A) administration both as a field of study as well as practice or activities involved in public administration. In addition,

the section discusses the pillars of Public Administration to position the study in public-private partnerships (PPPs) in the defined pillars of Public Administration.

Scholars distinguish Public Administration as a field of study and public administration as various activities supporting the broad discipline of Public Administration. For instance, Rutgers (2010:3) defines “Public Administration as a field of study or the study of public administration, while public administration is considered as an object of the study”. Zalmanovitch (2014:808) asserts that the identity of Public Administration should be viewed “as a field of inquiry and not solely as a profession” relying on a generic viewpoint. Public Administration is therefore a social science utilised by elected officials to address problems faced by citizens. Van der Waldt (2017:2) defines “Public Administration as a multi-dimensional field of study involving various research traditions and approaches focussing on governmental, political, economic, technological, legal, social, and cultural systems”. Raadschelders (2019:90) notes that Public Administration is an umbrella study of government.

Aligica (2015:112) conceptualises Public Administration as concerned about “the building, maintaining and operating in real life structures and processes that function as preconditions to the infrastructure and determinants of real-life public policies and their management.” Public Administration covers the entire system of government from managing the electoral system, policy development, policy implementation, monitoring and enforcement of laws and creation of regulatory environment for markets to operate efficiently, among others (Aligica 2015:112).

Pollitt (2016:4) argues that Public Administration is not a narrow field restricted to government machinery but transcends to resolving challenges faced by the broader society. Public administration therefore addresses service delivery concerns through various mechanisms such as policy-making and actual implementation. The objective of public administration in addressing societal needs has led to the fusion of public administration as a practice and as an academic discipline (Pollitt 2016:4). Public administration as an “object of study” is directly related to government functions including public entities and private sector organisations that deliver public services on behalf of the government. Durant and Rosenbloom (2017:719) assert that public administration involves several functions such as management, politics,



policy formulation, law, government, governance, adhering to hierarchy, collaboration, new public management (NPM) and regulation, among others.

Public administration is anchored on three pillars or “clusters of thought and practice” which are legal, managerial and political (Zalmanovitch 2014:808; Lan & Rosenbloom 1992:536; Rosenbloom 1983:219). Zalmanovitch (2014:808) asserts that these pillars constantly interface with each other producing a range of configurations that enrich the development of public administration. Often, the various configurations elevate one pillar over the other, but this is deemed as temporary in nature and should not be used as a justification for lack of focus of public administration (Zalmanovitch 2014:810). The three pillars answer the following questions (i) what is achievable (politics), (ii) how to attain the set goals or objectives (management), and (iii) which rules guide the process of achieving set objectives (legality). The three pillars clearly interface more frequently and sometimes may be sequential or operate concurrently (Zalmanovitch 2014:813).

The legal pillar elevates the supremacy of rule of law, that is, bureaucratic functions are subordinate to the rule of law and all functions and activities should conform to procedures and regulations (Zalmanovitch 2014:813). The principles of administrative law should inform and guide how decisions are made by public administration. In democratic states, the power of bureaucrats and politicians should be curtailed by the Constitution and other legal prescripts to avoid the pursuit of individual interests at the expense of public interest (Zalmanovitch 2014:814).

The political pillar utilises public administration to achieve the demands of the citizens, that is, the elected officials’ role is to control, influence and direct bureaucrats to attain political objectives (Rosenbloom 2013:387; Lan & Rosenbloom 1992:536). The political pillar manifests itself in two forms, firstly, by dictating how bureaucrats should deliver goods and services (politics of how) and secondly, by directing what goods and services to prioritise and deliver to citizens (politics of what) (Zalmanovitch 2014:814). The ‘politics of what’ reflects largely the political ideology of the governing party and bureaucrats act in accordance with the priorities set. On the other hand, the ‘politics of how’ seeks to influence managerial style of public sector managers. In modern public administration, politicians shape and define the form of public administration to cater for changing interests and priorities.



It is plausible that politics may dictate the execution of priorities and projects that may be deemed to be harmful to good administration and bureaucrats take the blame (Zalmanovitch 2014:814).

The managerial pillar answers the question of how bureaucrats attain the goals and objectives pronounced by elected officials. The managerial pillar relies on setting procedures to improve government operations to fast-track the delivery of services, enhances planning and improves efficiency and performance (Rosenbloom 2013:387; Lan & Rosenbloom 1992:536). The managerial pillar reflects the primary occupation of public administration as exclusively managerialism with core values of “economy, efficiency and effectiveness.” The managerial pillar is solely focussed on activities such as decision-making processes, motivation, communication, planning, efficiency, outputs, cost–benefit analysis and performance management, among others (Rosenbloom 2013:389; Zalmanovitch 2014:814). **Table 2.1** summarises the three public administrative clusters/pillars:

**Table 2.1: Public administration pillars**

<b>Pillar Dimension</b>	<b>Managerial (management)</b>	<b>Political (politics)</b>	<b>Legal (law)</b>
<b>Constitutional function</b>	<ul style="list-style-type: none"> <li>• execution</li> </ul>	<ul style="list-style-type: none"> <li>• legislators as policy makers</li> </ul>	<ul style="list-style-type: none"> <li>• adjudication by judges</li> </ul>
<b>Core values</b>	<ul style="list-style-type: none"> <li>• efficiency</li> <li>• economy</li> <li>• effectiveness</li> </ul>	<ul style="list-style-type: none"> <li>• representation</li> <li>• responsiveness</li> <li>• hierarchical accountability</li> </ul>	<ul style="list-style-type: none"> <li>• constitutional integrity</li> <li>• procedural due process</li> <li>• equal protection</li> <li>• robust substantive rights</li> </ul>
<b>Proposed structure</b>	<ul style="list-style-type: none"> <li>• ideal-type bureaucracy</li> </ul>	<ul style="list-style-type: none"> <li>• organisational pluralism</li> </ul>	<ul style="list-style-type: none"> <li>• adversarial</li> <li>• adjudication</li> </ul>
<b>View of individual</b>	<ul style="list-style-type: none"> <li>• impersonal case</li> </ul>	<ul style="list-style-type: none"> <li>• member of group</li> </ul>	<ul style="list-style-type: none"> <li>• member of class</li> <li>• reasonable person</li> </ul>
<b>Preferred way of knowing</b>	<ul style="list-style-type: none"> <li>• science</li> </ul>	<ul style="list-style-type: none"> <li>• public opinion</li> <li>• consensus</li> </ul>	<ul style="list-style-type: none"> <li>• logical case analysis</li> </ul>
<b>Decision-</b>	<ul style="list-style-type: none"> <li>• rational</li> </ul>	<ul style="list-style-type: none"> <li>• muddling</li> </ul>	<ul style="list-style-type: none"> <li>• precedential</li> </ul>

<b>Pillar Dimension</b>	<b>Managerial (management)</b>	<b>Political (politics)</b>	<b>Legal (law)</b>
<b>making</b>	comprehensive	through	incrementalism
<b>Budgeting</b>	• benefit/ cost	• incrementalism	• rights funding
<b>Implementation</b>	• forward mapping	• backward mapping	• decree
<b>Personnel</b>	• merit	• social representation	• equal protection

Source: Rosenbloom (2013:383).

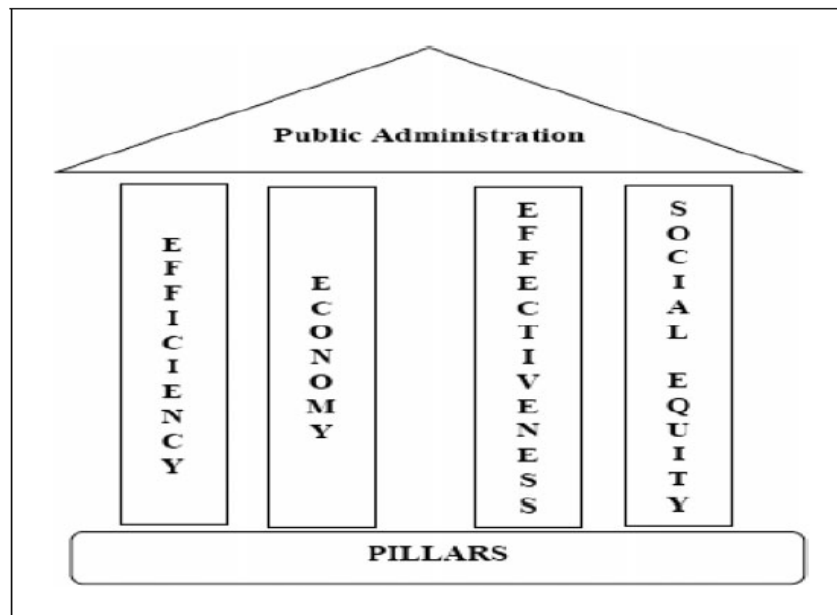
Zalmanovitch (2014:815) argues that the hierarchical classification of the three pillars without capturing the possibilities of interaction between or among the pillars is not robust enough to understand the heart of public administration. The use of trialectism promotes capturing effects of simultaneous interrelations of the three pillars (Zalmanovitch 2014:815).

There are differences observed in literature between pillars of public administration and public values. Van der Wal (2008:55) identifies 13 ethical values in public administration, namely “(1) honesty, (2) humaneness, (3) social justice, (4) impartiality, (5) transparency, (6) integrity, (7) obedience, (8) reliability, (9) responsibility, (10) expertise, (11) accountability, (12) efficiency and (13) courage.” Section 10 of the Constitution of the Republic of South Africa, 1996 (hereafter referred to as the Constitution) outlines values and principles governing public administration. These principles include among others:

- Professionalism;
- Efficient use of resources;
- Equity;
- Citizen participation;
- Accountability; and
- Transparency.

The National Academy of Public Administration (hereafter referred to as NAPA) asserts that the public administration discipline is anchored on the “four key pillars of efficiency, economy, effectiveness and social equity” (Dooley 2020:114). This is a

direct departure from the pillars suggested earlier by Rosenbloom (2013:383). The core values under the managerial pillar in **Table 2.1** are efficiency, economy and effectiveness and these values are aligned to the pillars of public administration as advanced by NAPA (Dooley 2020:114) and Durant and Rosenbloom (2017:722) as reflected in **Figure 2.1**. For a very long time, the pillars of public administration were known to be efficiency, economy and effectiveness (the so called 3 Es) and social equity was advanced as the fourth pillar by NAPA in 2005 (Norman-Major 2011:235).



**Figure 2.1: Pillars of Public Administration**

Source: Dooley (2020:114).

The pillar of efficiency has its foundation in natural rights philosophy that forbids possession of more than one can realistically utilise (Durant & Rosenbloom 2017:722). Self-consciousness and doing the right things are requirements for the efficiency pillar. Inherently, decisions on “what are proper things involve political, legal, and ethical considerations including managerial concerns” (Durant & Rosenbloom 2017:722). In other words, the efficiency pillar embodies the legal, political and managerial pillars proposed by Lan and Rosenbloom as reflected in **Table 2.1**. Broadly, efficiency is a measure of the ratio of output in relation to the input exerted into an activity. However, in public administration, efficiency extends to values and accountability in addition to output, as public entities have multiple goals. The concept is associated with New Public Management (NPM) (Manzoor 2014:2). Frederickson (2010:xv) conceptualises efficiency as “achieving the most, the best, or

the most preferable public services for available resources". In essence, public service seeks to maximise society's value from the prudent management of available resources. In practice, efficiency in public administration may involve actions such as short turnaround times on requested services, easy accessibility to government offices, a minimum waiting period for trials, and early response for emergency services (Norman-Major 2011:235).

The economy pillar is associated with the cautious use of scarce resources to achieve a defined level of public services. At practical level, economy within public administration may involve getting the lowest bid on contracts, outsourcing of public services and undertaking activities at low cost or with fewer resources (Norman-Major 2011:234). In its simplistic form, the economy pillar embodies good stewardship of public resources to achieve cost savings when serving the citizens. Public sector managers have to consider the achievement of economy in the short run versus long run efficiency. For instance, investment in water infrastructure projects may not derive short-term gains but result in long-term sustainability of water delivery. The narrow focus on economy might sacrifice long-term efficiency or effectiveness (Norman-Major 2011:235).

Effectiveness is achieving success in delivering the desired goals and objectives (Norman-Major 2011:236; Van der Wal & Huberts 2008:270). Similarly, Manzoor (2014:4) describes effectiveness as the end product or real service delivered to the public provided by the government. There is no consideration of the cost of the service or product as the focus is on the final product or service. Effectiveness is a measurable concept with many proven tools to quantify the success of the public sector in achieving defined goals (Norman-Major 2011:236).

Social equity was advanced as another pillar to address the limitations of the three other pillars (economy, effectiveness, efficiency) in achieving redistributive effect. The other three pillars did not focus on who the public services are directed towards (Norman-Major 2011:236). Dooley (2020:114) notes that the foundation of "social equity can be traced to the seminal works of Woodrow Wilson" who advanced the argument that public sector managers should consider the implementation of the law with equity considerations. Social equity encompasses issues of law. At a more practical level, social equity addresses issues of historical racial inequality,

maltreatment of minorities and other marginalised populations (Dooley 2020:115). Nijaki (2015:88) argues that social equity should be the central tenet of public administration.

Frederickson (2010:48) aptly captures the essence of “social equity as the most productive governments, the most efficient governments, and the most economising governments can still be perpetuating poverty, inequality of opportunity and injustice.” Therefore, social equity enhances the political and economic power of the marginalised sections of the population (Durant & Rosenbloom 2017:723). Social equity is conceived as consisting of a number of attributes such as procedural fairness, equal rights, distributive justice, inclusiveness and equal participation in public policy matters (Svara & Brunet 2005:256-257; Norman-Major 2011:238). Attributes such as procedural fairness, equal rights and distributive justice are issues of law signifying the interface among the pillars. Mulyadi, Kusumasari and Keban (2018:38) distinguish equity and equality by asserting that equity considers fair or just distribution of resources or policies, while equality points to uniformity or same distribution. In this regard, social equity may be viewed in terms of seeking to achieve diversity and multiculturalism and addressing other inequities such as sexual orientations, religion, disability status, immigration status and language of origin (Mulyadi *et al.* 2018:39).

The pillars described above may also face conflicts in the daily duties of public sector managers. For instance, Frederickson (2005:178) identifies potential conflict between principles of fairness and efficiency by making the following observation:

*“The private market is designed to be efficient but not to be fair; democratic self-government is designed to at least try to be fair, and hope to be efficient.”*

This perspective points to the distinction between public sector philosophy (“guardian moral syndrome”) and private sector philosophy (“commercial moral syndrome”) which is normally raised in the provision of public goods and service by the private sector (Van der Wal & Huberts 2008:267).

In summary, the pillars discussed are economy, effectiveness, efficiency and social equity. These pillars embody managerial, legal and political attributes in execution of public services, for instance, to ensure efficiency in the provision of public services management plays a critical role. Economy, effectiveness and efficiency pillars

exhibit features associated with New Public Management (NPM) and to some extent the motivation for pursuing PPPs to deliver public services. Therefore, these pillars provide a link between PPPs and Public Administration as articulated later in this chapter.

The pillars of Public Administration did not just evolve on their own but were birthed by developments and events faced by governments. The next section traces some of the key developments in Public Administration.

### **2.1.2 Development of Public Administration**

Public Administration has evolved over time and Rutgers (2010:6) identified the four phases of its development as: prehistory, the classic period, the modern study and the differentiated or contemporary period. In the pre-history and classic period, no specific study of Public Administration emerged, and this period was governed by monarchs (Rutgers 2010:7). In the phase of the modern study of public administration, scholars like Woodrow Wilson and Lorenz von Stein envisaged a comprehensive administrative science which was laden with the need for practical relevance of knowledge to solve real problems. The pursuit of problem solving transformed the way in which public administration was organised by considering some of the practices that were historically in the domain of the private sector. During the differentiated or contemporary period, significant strides were made to “carve out” the field of Public Administration. During this period concepts related to governance and new public administration became popular as a result of the need to address specific problems in public administration during that time (Rutgers 2010:7).

The need to seek solutions to existing problems of the time was the main driver for the development of the discipline and its practice. Given the diversity of the problems faced during the different time periods, solutions also varied and this led to constant interface of bureaucratic functions with politics and business, among others. Consequently, Lu (2013:308) argues that competing paradigms emerged in an attempt to solve unique problems and in the end no paradigm was able to dominate in the development of public administration. Henry (2010:27) identifies the evolving paradigms of public administration with several disciplines such as politics, administration science and administration. These overlapping areas contributed to

the difficulties faced by public administration as a discipline as its boundaries are not precisely delineated.

Henry (2010:27) identified the development of public administration overlapping paradigms, namely:

- the politics/administration dichotomy (1900-1926);
- the principles of administration (1927-1937);
- public administration as political science (1950-1970);
- public administration as administrative science (1956-1970);
- public administration as public administration (1970-present); and
- governance (1990 to present).

Each paradigm served a particular purpose given a particular context during that period. The development of subsequent paradigms was linked to the limitations of the preceding paradigm to respond to new challenges.

Public Administration is now taking a multidisciplinary or interdisciplinary approach limiting its ability to weave in consensus on the overarching grand, unifying theory for the field. The interface between scientific, scholarly and professional needs inhibits the development of unified theory (Raadschelders 2019:80). The pluralism in public administration theory anchored in several theories from other disciplines such as “theories of political control of bureaucracy, theories of bureaucratic politics, theories of public management, rational choice theory and theories of governance”, among others lead to lack of a unifying theory to account for the complexity of the Public Administration field (Frederickson & Smith 2003:4). Despite its lack of precision in terms of its boundaries and lack of a unifying grand theory, public administration remains agile and able to respond to the change of the general government system (Rutgers 2010:18; Van der Waldt 2016:222). Changes in the global environment (political and economic) are resulting in public officials having to respond in ways not experienced before. Van der Waldt (2016:222) posits that it is counter-productive to continue seeking a unified theory but rather accepts that public administration is an interdisciplinary study.

The evolution of the discipline and the need to address emerging challenges within the public sector resulted in the lack of a unifying theory. Scholars continued to advance the field in an interdisciplinary or multidisciplinary research focus leading to



the questioning of the scope of public administration (ontology). Raadschelders (2019:80) observes that public administration lacks a common theoretical meaning given its interfaces with several disciplines such as legal, psychology, history, politics and economics among others, which tend to cloud its ontology.

Rutgers (2010:15) proposes three dichotomies to entangle the intricacies of the concept of public administration and these are public and private; state and society; and politics and administration. Public and private are distinguished on the basis that private enterprises focus on efficiency while the public's primer is effectiveness. The supposed efficiency of the private sector brought the New Public Management paradigm into the fray by enhancing the responsiveness of public institutions to their customers and fostering managerial accountability (Christensen & Laegreid 2011:1).

The politics and administration dichotomy as proposed by Rutgers is linked to the separation of powers between bureaucrats and elected officials. The "politics-administration dichotomy is premised on the Traditional Public Administration paradigm which emphasises formal control of the political leadership and a strict hierarchical bureaucracy administering policies decided by the politicians" (Haque 2019:140; Hughes 2003:17). Politics and administration have intellectual boundaries which reinforce their neutrality, and principles such as impersonality, hierarchy, specialisation and strict observance of the rule of law characterise this dichotomy (Haque 2019:140). The relationship of elected officials and bureaucrats in practice requires complementarity, interdependency and extensive consultations (Demir & Reddick 2015:583; Demir 2009:876; Svava 2006:133). In addition, even if the roles of the politicians and administrators are distinct, there are some overlapping roles which necessitate reciprocity of influence in policy formulation between politics and administration (Demir & Reddick 2015:583; Demir 2009:876; Svava 2006:133). Audette-Chapdelaine (2016:458) argues that the complementarity and reciprocal model advances the mutual support between elected officials and senior bureaucrats with politicians defining the vision and bureaucrats responsible for implementation of government projects. There are shared responsibilities between the politicians and senior administrators such as policy-making which enhances complementarity (Audette-Chapdelaine 2016:458). Svava (2006:133) is of the opinion that the politics-administration dichotomy is based on the misinterpretation of Woodrow Wilson,



Frank Goodnow and Leonard White's work, which did not argue for separation but advocated complementarity between politicians and bureaucrats.

The final dichotomy as presented by Rutgers considers the relationship between the state and society in that public administration serves both the state (decision-making) and society (people for whom authority is exercised). This dichotomy is linked to public governance which involves the management of complex networks, consisting of many different actors (both internal and external to the institution) with divergent goals and uneven influences (Casady 2020:162; Benton 2013:220; Kickert 1997:735). Rutgers (2010:18) defines the relationship between the state and society as governance. Public governance therefore seeks to influence societal processes in a public policy network of many other co-directing actors (Casady 2020:162; Benton 2013:220). This dichotomy is discussed in detail in Section 2.2.6 under New Public Governance (NPG).

Given the brief context highlighted above, the evolution of the different paradigms is discussed below in the following sequence: Traditional Public Administration, New Public Administration, Public Management, New Public Management, New Public Governance and New Public Service.

## **2.2 Public administration regimes**

A paradigm is conceptualised as a framework used to refine thought process and organise an understanding of a social phenomenon (Vyas Doorgapersad 2011:1). In other words, a paradigm is a set of beliefs and assumptions (Fard 2012:59). The term paradigm in social sciences emerged from the work of Thomas Kuhn and is defined as “universally recognised scientific achievements that for a time provide model problems and solutions to a community of practitioners” (Kuhn 1970: viii). The existence of a paradigm guides researchers in conducting research within a given discipline (Vyas Doorgapersad 2011:235-237). A paradigm shift therefore reflects a modification in the theoretical framework by individuals or communities and begins to consider other views to form a new thinking.

### **2.2.1 Traditional or classic public administration**

The theoretical basis for Classic Public Administration in the 20th Century is derived from Woodrow Wilson, Frederick W. Taylor (the United States), the Northcote - Trevelyan Report (the United Kingdom) and Max Weber (Germany). The theory of

bureaucracy by Weber anchored the theoretical underpinnings of Classic Public Administration (Katsamunskas 2012:74). The role of bureaucrats was treated as non-actors emanating from the historical disciplinary split between public administration and political science (Sorensen 2002:699). The disciplinary split was founded on the view that “it is possible to separate politics and administration based on the work of Max Weber (1920) and Woodrow Wilson (1887)” (Sorensen 2002:699). The assumption was that the bureaucrat or administrator acted only on instruction of the political leadership (Garrett 2016:188; Denhardt & Denhardt 2011:4). The bureaucracy operates in a hierarchical structure with the main objective of serving the public (public interest) based on the policies decided by the politicians (Garrett 2016:188). Woodrow Wilson introduced the politics - administration dichotomy stressing the need for separation of politics from administration because administrative questions are different from political questions (Katsamunskas 2012:76).

The separation of politics and administration led to the development of effective oversight just like in private companies where the board oversees the work of management. In this regard, Denhardt and Denhardt (2011:5) advocate for the establishment of executive authorities to manage bureaucracies and this led to the well-known dictum “administration lies outside the proper sphere of politics and administration questions are not political questions”.

Rhodes (2016:639) argues that Traditional Public Administration is characterised by an administration under political leadership with bureaucrats implementing what has been decided by the elected officials. The defining features of Classic Public Administration are not inefficiency, high costs and excessive red tape, but bureaucrats following hierarchical structure in undertaking their work (Rhodes 2016:639).

McCourt (2013:3) summarises the main features associated with Classic Public Administration as follows:

- clear distinction between politics and administration;
- clear separation between elected politicians and appointed administrators;

- administrators are professionals appointed on merit and with requisite qualifications;
- public administration is hierarchical, predictable and based on set rules;
- existence of division of labour among employees in a hierarchical structure;
- the organisation owns and controls the resources as opposed to individual ownership; and
- administrators serve public interest objectives of the society and not self-interest.

The politics-administration dichotomy lost traction with the growing interest by public administration researchers investigating the role of public administrators in democracy/politics which found that bureaucrats play an active role or influence the political environment. Bureaucrats under classic public administration provide policy related advice to political principals and manage the implementation of the politician's decision. This is contrary to what was postulated by Max Weber and Woodrow Wilson (Rhodes 2016:639). The assumption that bureaucrats under classical public administration were inefficient was dispelled. The rationale for classic public administration was to ensure delivery of services in an economic and efficient manner and to facilitate the deployment of resources productively (Pyun & Gamassou 2018:249). Pyun and Gamassou (2018:249) further argue that the claim that efficiency considerations originated from New Public Management are misplaced as these concepts have been part of Traditional Public Administration. However, the Traditional Public Administration paradigm is best suited in a stable and predictable environment and is not ideal in a turbulent and dynamic environment (Pyun & Gamassou 2018:251; Katsamunska 2012:74).

Hong (2017:122) contends that politics and administration are best described as hierarchical with no defined separation of responsibilities. This assertion is based on the view that elections are not only used to hold politicians accountable but equally the bureaucracy which they appoint and influence. Elections serve as a means of redirecting the attitudes and behaviour of bureaucrats and their interaction with the citizens (Hong 2017:122). In other words, politicians have the power to appoint bureaucrats who may share their political ideology and therefore there is greater

chance of alignment and the split between politics and administration becomes artificial.

Despite its lack of a single and coherent foundation, “it is argued that the traditional model of public administration has been successful in exploring public sector management” (Katsamunska 2012:75).

### **2.2.2 New Public Administration**

New Public Administration (NPA) originated from 1960 to the 1970s to respond to the limitations identified from the Classic Public Administration (Pyun & Gamassou 2018:249; Mulyadi *et al.* 2018:37). During the 1960s, public administration was influenced significantly by social turbulence and several crises which required reconfiguration of public organisations (Nasrullah 2005:200). Classic Public Administration was found to be inadequate to react to changes in the governance ecosystem and addressing critical emerging problems facing governments (Mulyadi *et al.* 2018:37). The emergence of the “New Public Administration Movement” in the late 1960s propelled the discipline to depart from the Traditional Public Administration. This movement advocated for the study and practice of government to be better suited to respond to the evolving needs of the post-industrial society. The significant milestones attributed to the NPA Movement include the following (Nasrullah 2005:200):

- The Honey Report on Higher Education for Public Service (1967);
- The Philadelphia Conference on the theory and practice of public administration (1967);
- The Minnowbrook Conference (1968);
- Publication of a book edited by Frank Marini, entitled Public Administration: The Minnowbrook Perspective (1971); and
- Publication of a book edited by Dwight Waldo entitled Public Administration in a Time of Turbulence (1971).

Traditional Public Administration was criticised for its rigid insistence on the politics-administration dichotomy (Basheka 2012:47). Thornhill and van Dijk (2010:103) argue that NPA elevates the role of public administrators to include both policy formulation (initially thought to be the domain of politicians under traditional public administration) and policy implementation. In this regard, NPA brought public

administration and political science closer together including the intense concern for emerging societal challenges and innovative ways of addressing social change (Pyun & Gamassou 2018:250). NPA allowed the integration of public administration with the fundamental tenets of political theory.

While Classic Public Administration limits itself to efficiency, economic and productivity considerations (so-called economic standards), NPA introduces an additional dimension of social equity to cater for social changes and evolving citizen's needs (Mulyadi *et al.* 2018:37; Pyun & Gamassou 2017:249). The quest for social equity and social justice fosters social cohesion and improves the general welfare of the society. Welfare of society is enhanced by the introduction of a participatory decentralisation model to address specific societal problems. NPA also promotes collaboration such as public private partnerships for community projects (Pyun & Gamassou 2018:250). Equally, citizen involvement is identified as a form of promoting community ownership and community control of public services (Pyun & Gamassou 2018:250).

The underlying principles of New Public Administration as indicated above include (Katsamuska 2012:78):

- participation in both political process and internally within the organisation;
- the various layers of the bureaucracy participate in the organisational process as a way of dispersing power within the organisation;
- decentralisation to ensure active participation by citizens in both government and organisational processes; and
- representative bureaucracy to facilitate client-focussed organisations.

The criticism levelled against NPA is its key reliance on the bureaucratic administration (as opposed to democratic administration), which is deemed not to be a sufficient structure to create a responsive and productive public service. Democratic administration encompasses diverse decision-making structures, participation by the majority in selecting the popular alternative and decentralised administration authority (Nasrullah 2005:201). Social equity as promulgated by the NPA is still an underdeveloped concept in the field of public administration, as much

reliance is still placed on the pillars of economy, efficiency and effectiveness associated with Traditional Public Administration (Mulyadi *et al.* 2018:38).

### **2.2.3 New Public Management (NPM)**

NPM is founded in neo-classical and new institutional economics with specific focus on the public choice, transactions cost and principal agent theories. These theories advocate for the separation of policy-making and implementation in a decentralised administrative system (Hyndman & Lapsley 2016:388). Mansour (2018:90) considers NPM as a marriage of economic theories as cited by Hyndman and Lapsley above and private sector management techniques. Osborne (2006:382) contends that NPM is based only on neo-classical economics, specifically “rational/public choice theory following prominent writers such as Tiebout and Niskanen”. Under NPM, service delivery is conducted through a collection of independent contractors who are appointed through a competitive process (Osborne 2006:382). Other authors (Robinson 2015:7; Brinkerhoff & Brinkerhoff 2015:225), contend that NPM’s theoretical rooting is not only based on public choice theory but also on principal-agent theory. Both the public choice and principal agent theories postulate that behaviour of bureaucrats and representative government is subject to and influenced by individual self-interest (Brinkerhoff & Brinkerhoff 2015:225).

The market-based foundation of NPM sought to challenge the tenets of traditional public management theory. The Anglophone countries (England, Australia and New Zealand) challenged the traditional public management theory in the 1980s based on the prevailing conditions in those countries which led to the emergence of New Public Management (NPM) reforms (Cameron 2010:680). The driving force for the introduction of NPM was the financial crises (Thornhill & van Dijk 2010:104) which required alternative service delivery methods with existing budgets, in other words, doing more with less (Osborne 2015:640). Public organisations were forced to find ways to cope with the changing environment and ensure that they were effective, market orientated, mission and results driven, focussed on customers and decentralised (Pyun & Gamassou 2018:251; Vyas-Doorgapersad 2011:238). These attributes reflect the need for swift adaptation to environmental change and the focus on outcomes by government. Given the various facets of NPM reform, NPM is considered as a convenient shorthand for various administrative doctrines evolving

around “privatisation, decentralisation, marketisation, output orientation, quality systems and intensity of implementation” (Hyndman & Liguori 2016:8). NPM reforms are not homogenous and include various iterations or contours or facets (Hyndman & Liguori 2016:8). These contours come at different times and in several different configurations (Hyndman & Lapsley 2016:403). Rhodes (2015:640) concurs with the idea of “contours” by identifying three different waves associated with NPM. The first wave was associated with managerialism, performance measurement, management of results and outcomes, and establishing value for money for all government investments. The second wave involved embracing the supremacy of neoliberal values and promotion of competition such as use of contracting public services and use of public private partnerships. The third wave focussed on service delivery and meeting the needs of the citizens (Rhodes 2015:639-640).

NPM as a paradigm is characterised by several facets or doctrines which include the following (Mansour 2018:88; Rhodes 2015:640; Osborne 2006:379; Nasrullah 2005:197, 202; Gruening 2001:17):

- transparency of administration;
- entrepreneurial leadership in public sector entities;
- effectiveness;
- budget cuts or expenditure reduction;
- foster competition by outsourcing some of the public services or through privatisation;
- decentralised bureaucracy and separation of politics and administration;
- extensive human capital management with the possibility of a flexible hiring regime;
- break up of large vertically integrated public organisations into smaller units to improve service delivery;
- integration of similar units in public sector organisations; and
- the adoption of private sector management styles.

The ideological thinking of NPM is derived from private sector practices in that NPM calls for the adoption of business-like techniques with much emphasis on organisational performance, restructuring of public entities to be aligned to market expectation and ideals (Hyndman & Lapsley 2016:404).



Hood (1991) coined the term NPM to describe all the attributes associated with the adoption of market-based principles. Several authors captured these characteristics in a few phrases, for example:

- Lan and Rosenbloom (1992:535) refer to NPM as “market-based public administration”;
- Rhodes (2015:639) refers to it as “managerialism” or “hands-on professional management”;
- Ferlie, Ashburner, Fitzgerald and Pettigrew (1996) describe NPM as “managerial thought”, and
- Osborne (2006: 379) denotes it “entrepreneurial government”.

Several factors influenced the rise of NPM, and these factors include neoliberal ideas, shifts in political ideology and economic and fiscal pressures, among others. Each of these factors will be discussed in detail below. The influence of neoliberal or New Right ideas played a role in the rise of NPM, given its criticism of the expanding size of the government without concomitant improvement in service delivery quality and minimum regard of the citizens’ needs (Rhodes 2015:640; Larbi,1999:3).

The change in the political landscape and ideological views in the Western world provided an impetus in the adoption of NPM. Leading the NPM reform agenda was the United Kingdom in 1979 with the Conservative government coming into power and the three subsequent governments (Hyndman & Lapsley 2016:405; Rhodes 2015:639). In the United States case, the election of Ronald Reagan in 1981 fast-tracked the reforms in the public sector in favour of market-oriented reforms. The same trend continued from the Ronald Reagan administration to the Goerge H.W. Bush administration witnessing further deregulation, privatisation and devolution of key functions to local government level (Rhodes 2015:639; Lan & Rosenbloom 1992:535). Australia and New Zealand also experienced reforms after the election of a pro-reform government, and in New Zealand the labour government embraced the reforms with the objective of curbing public expenditure (Rhodes 2015:639).

The availability of information technology provided necessary tools and mechanisms to institute public management reforms, monitor its implementation and foster greater accountability. For instance, information systems assisted with



decentralisation of functions and facilitated the creation of executive agencies (Chen 2020:2; Greer 1994:42).

The growth and influence of international management consultants also fuelled the NPM attraction by governments. International consultancy firms exhibit superior communication and marketing skills to campaign and motivate for PPPs (Hall 2015:13). The term “consultocracy” is used to capture the influence of consultants and interest groups in driving public policy debates (Gunter, Hall & Mills 2015:519). Consultancy services include bankers/financiers, lawyers, construction firms and accountancy firms, among others (Hall 2015:13). The integration of consultants into public policy discussion negates or minimises political debate by elected politicians and was replaced with “consultantese” (Gunter *et al.* 2015:519; Hall 2015:29). Vested interests by consultants pushed them to be indispensable by packaging NPM reforms in a manner that would create future work (Boardman *et al.*, 2016:13; Gunter *et al.* 2015:522). Campagnolo (2013:164) defines consultants as professional storytellers with the ability to contextualise the problem, recommend appropriate action through persuasion and possess skills similar to lobbyists or marketers as opposed to trained experts. The value addition of consultants is not always positive, as their lobbying skills appear more powerful than their actual contribution and derive supremacy due to relationships with bureaucrats and politicians (Gunter *et al.* 2015:528).

The rise of NPM is linked with the following administrative 'megatrends', namely (Hyndman & Lapsley 2016:404; Rhodes 2015:640; Hood 1991:1):

- Slowing down or curbing public spending growth;
- Promotion of private sector participation through privatisation and quasi-privatisation;
- Use of technology to automate the delivery of public services; and
- Promotion of the international agenda and intergovernmental cooperation.

Cameron (2010:680) suggests that “NPM is not a coherent theory” but represents broad ideas, namely the use of a private sector ethos (for example performance management, contract appointments) and secondly, the use of market interventions (for example privatisation and PPPs). Haque (2007:179) suggests that the original

NPM model is devoid of a coherent analytical framework and relies on several guiding doctrines without connecting these doctrines in a logical manner. Equally, Wollmann (2004:641) argues that NPM reforms have foundation in “bundles of various, in part contradictory”, thoughts with the common attribute being the use of the private sector’s organisational and operational principles to deliver services. The basis for NPM was therefore to address the state’s shortcomings and public administration failures.

Despite the absence of a coherent theory and analytical framework, NPM was associated with the reduction of bureaucratic bottlenecks and championing efficient provision of services. In addition, NPM brought about effectiveness of public organisations, enhanced the turnaround time to meet client’s needs, contained public expenditure and fostered managerial accountability (Christensen & Laegreid 2010:1).

PPPs are “used in infrastructure project delivery through long term contractual arrangements between public sector and private partners” (Casady, Eriksson, Levitt & Scott 2020:162). The motivation for PPPs is conceived to be aligned to NPM given its desire to improve efficiency, augment internal operations of government agencies and outsource public services. This will be discussed further in section 2.6.

#### **2.2.4 African perspective of NPM**

The factors discussed above equally apply to less developed countries (and Africa in particular). However, there are additional peculiar influences in Sub-Saharan Africa for NPM reforms. The NPM reforms in Africa and the developing world in general were partly attributed to the structural adjustment programmes promoted by the International Monetary Fund and the World Bank which insisted on pro-market and pro-private sector reforms as a condition of getting financial assistance and debt rescheduling (Boardman *et al.* 2016:12; Hall 2015:8; Diale, Maserumule & Mello 2007:644). Structural adjustment programmes led to the reduction in public sector employees, and the removal of subsidies on basic goods and services to ensure that private sector participation in the economy was not hindered and its share in the economy grew (Hall 2015:8).

Hope (2001:123) identifies the crisis of governance, malfunctioning and an unstable political environment requiring intervention by public administration. Intervention was

envisaged to include reconfigured or new institutions that are anchored on democratic values to facilitate relationship building within the society and citizens. Efforts towards institutions that support the rule of law and development of sound and equitable legal frameworks were promoted and the agencies leading such processes were linked to multilateral organisations. Existing institutions of government exhibited weak capacity and administrative weaknesses which translated into weak policy-making, persistent delays in implementation, “decay of public infrastructure, the poor quality of public services, high transaction costs and widespread corruption” (De Merode 1991: ii).

In some African countries with an established legal framework supported by complex institutional structures, governments objected to the rigid bureaucratic procedures which hinder their ability to respond to challenges. NPM then offered an escape route by creating management structures and an institutional framework that provides flexibility for effective interventions (Hope 2001:123). Developments on the international stage and specific experiences from selected countries altered the thinking of some African countries. Larbi (1999:6) argues that market-oriented reforms and the collapse of the Soviet Union influenced public management reforms in Africa. Maserumule (2010:88) refers to the practice of shaping one’s ideology based on fixation to foreign paradigm or scholarship as global *ipsedixitism*. Development of some of the paradigms such as NPM in Africa and other developing countries was as a result of global *ipsedixitism* or *learned imitationism* without critically evaluating the basis for such public administration reforms (Clapper 2005:183). Post 1990, South Africa is cited as having “uncritically embraced” NPM and its public administration was shaped based on “forces of the West” (Maserumule 2010:88; Clapper 2005:183). **Table 2.2** summarises some of the values underpinning NPM as a market-based paradigm:

**Table 2.2: Market-based values per each pillar of Public Administration**

Pillar Dimension	Managerial	Political	Legal
<b>Constitutional function</b>	<ul style="list-style-type: none"> <li>executives as contract analysts, negotiators, programme evaluators</li> </ul>	<ul style="list-style-type: none"> <li>conduit for citizen demands</li> </ul>	<ul style="list-style-type: none"> <li>adjudication by judges</li> </ul>

<b>Pillar Dimension</b>	<b>Managerial</b>	<b>Political</b>	<b>Legal</b>
<b>Core values</b>	<ul style="list-style-type: none"> <li>• cost effectiveness</li> <li>• entrepreneurship</li> <li>• competition</li> <li>• quality</li> </ul>	<ul style="list-style-type: none"> <li>• public choice</li> </ul>	<ul style="list-style-type: none"> <li>• personal responsibility</li> </ul>
<b>Political referent</b>		<ul style="list-style-type: none"> <li>• populists</li> </ul>	
<b>Proposed structure</b>	<ul style="list-style-type: none"> <li>• diverse competitive service centres</li> <li>• principals and agents</li> <li>• flat structure</li> </ul>	<ul style="list-style-type: none"> <li>• fragmented authority</li> <li>• multi-layered implementation</li> <li>• citizen participation</li> </ul>	<ul style="list-style-type: none"> <li>• alternative dispute resolution</li> </ul>
<b>View of individual</b>	<ul style="list-style-type: none"> <li>• customer</li> <li>• self-interested rational decision maker</li> <li>• coproducer</li> </ul>	<ul style="list-style-type: none"> <li>• consumer of public goods and services</li> <li>• participant</li> </ul>	<ul style="list-style-type: none"> <li>• rational maximiser</li> </ul>
<b>Preferred way of knowing</b>	<ul style="list-style-type: none"> <li>• observation (quantitative and qualitative)</li> </ul>	<ul style="list-style-type: none"> <li>• market outcomes</li> </ul>	<ul style="list-style-type: none"> <li>• law and economics analysis</li> </ul>
<b>Decision-making</b>	<ul style="list-style-type: none"> <li>• cost minimisation</li> <li>• market analysis</li> </ul>	<ul style="list-style-type: none"> <li>• utility optimisation</li> </ul>	
<b>Rule making</b>	<ul style="list-style-type: none"> <li>• centralised agenda</li> <li>• cost-benefit analysis</li> </ul>	<ul style="list-style-type: none"> <li>• negotiation</li> </ul>	<ul style="list-style-type: none"> <li>• synoptical</li> </ul>
<b>Budgeting</b>	<ul style="list-style-type: none"> <li>• entrepreneurial</li> <li>• market price oriented</li> </ul>	<ul style="list-style-type: none"> <li>• user pays</li> </ul>	
<b>Implementation</b>	<ul style="list-style-type: none"> <li>• monitoring of third delivery on contracts</li> <li>• competition</li> <li>• quality, performance</li> </ul>	<ul style="list-style-type: none"> <li>• third party</li> </ul>	<ul style="list-style-type: none"> <li>• alternative dispute resolution</li> </ul>
<b>Personnel</b>	<ul style="list-style-type: none"> <li>• contractual</li> </ul>	<ul style="list-style-type: none"> <li>• greater reliance on political executives</li> </ul>	<ul style="list-style-type: none"> <li>• liability</li> <li>• agency</li> </ul>

Source: Adapted from Lan and Rosenbloom (1992:537).

### **2.2.5 New Public Service (NPS)**

Basu (2006:634) identifies the “theories of democratic citizenship, models of community and civil society and organisational humanism as the precursors” to New

Public Service. The pure focus on managerialism under NPM led to the neglect of “the public and publicness” in Public Administration by elevating market-driven models as the only way of delivering government services efficiently (Denhardt & Denhardt 2015:664; Nabatchi 2010:309). The political theory of administration which places citizens as sovereigns is desirable in the decision-making process and will take centre stage in the process of rediscovering public administration (Nabatchi 2010:309). Adhering to democratic values and citizenship rights has immense benefits in building an engaged society, allowing government to deliver services more effectively (Denhardt & Denhardt 2015:664). Democratic governance and economic democracy require the participation of the community at large whose interests take a long-term view and go beyond individual self-interest (Pyun & Gamassou 2018:252; Box, Marshall, Reed & Reed 2001:612). Acting in the community’s interest (sometimes known as public interest) does not relegate individual self-interest but rather balances the two (Basu 2006:635).

New Public Service as described above is anchored on the principle that the public service’s objective is to provide an effective platform for citizens to express their needs and for government to develop mechanisms to meet such needs. The provision of public services is dictated or steered by the society (Denhardt & Denhardt 2000:549). Some of the phrases used to describe NPS by several researchers (Pyun & Gamassou 2018:252; Denhardt & Denhardt 2015:666-668; Perry 2007:8) are the following:

- steer rather than row;
- serve rather than steer;
- those who steer the boat have more power;
- serve and empower citizens;
- think strategically, act democratically;
- serve citizens, not customers;
- value citizenship over entrepreneurship;
- seek public interest; and
- value people, and not just productivity.

From this description, NPS elevates citizens to be the primary focus for public administration and citizens should freely express their needs for government to deliver. NPS seeks to improve citizen's confidence in public administration by advancing their interests through various channels such as collaboration, transparent decision-making and integration of citizens in decision-making, among others. NPS is built on citizen's trust, common shared values of citizens and public administration (Pyun & Gamassou 2018:252).

Perry (2007:7) attributes NPS with the following characteristics:

- diversity as opposed to the narrow government centric public service;
- recognition of the non-governmental;
- flexibility in career move between the private sector, the non-governmental sector jobs and the public sector ("sector switching"); and
- strong resolve to make an impact in the world.

Denhardt and Denhardt (2015:664) note that it is impossible to clearly demarcate public administration into two separate camps: one advancing purely market principles (NPM) and the other focussing exclusively on democratic values (NPS). The key consideration is the extent to which some values align to either NPM or NPS. The distinction between NPM and NPS is that NPS puts emphasis on citizens' participation as opposed to the efficiency driven values advocated by NPM (Denhardt & Denhardt 2015:664).

### **2.2.6 New Public Governance (NPG)**

NPG is founded in organisational sociology and social network theory and acknowledges the role played by both internal and external organisations with its various actors in the effective delivery of public services (Xu, Sun & Si 2015:13; Pyun & Gamassou 2018:252). Apart from organisational sociology and network theory, NPG can be traced to organisational social capital literature, relational marketing literature and management theory (Osborne 2006:384). Similar to NPS, NPG involves a broad range of stakeholders and different actors (collaborators) in policy formulation, implementation and delivery of services. These stakeholders and actors include national, regional, provincial and local governments, political formations, non-profit organisations, special purpose interest groups and private

sector institutions, citizens, business, media and trade unions, among others (Benton 2013:220; Loffler 2009:219). Collaboration with various actors takes different forms, either formal or informal. Formal arrangements may include an agreement between government and a private partner in the provision of water, while informal arrangements involve ad hoc requests for assistance or input or information sharing (Benton 2013:220). NPG therefore elevates the importance of external orientation of the socio-political environment and simultaneously managing complex relationships which are driven by divergent views or conflicting objectives of stakeholders. Haveri (2006:33) argues that complexity is inevitable given a non-linear value system of the actors which might cause instability and unpredictability in managing the network.

Researchers developed different terms to capture the principles underpinning NPG, such as “New Governance” (Rhodes 1996:656), and “Public Governance” (Skelcher, Mathur & Smith 2005:593). Public governance extends managerialism or strict business-like concepts under NPM to include legality and legitimacy in the delivery of public services (Mansour 2018:92; Kickert 1997:732). Caperchione, Demirag and Grossi (2017:2) describe NPG as an emergent hybrid variant of NPM as it captures the notion of government working as a business enterprise, “minimising public expenditure and improving the quality of public services” through competition. NPG is associated with terminology such as (Osborne 2006:384):

- “plural state” which reflects the various roles played by multiple inter-dependent stakeholders in the delivery of public services; and
- “pluralist state” which defines “multiple processes involved in the policy-making cycle.”

Consequently, these two forms of plurality associated with NPG emphasise inter-organisational interactions which seek to improve the service outcomes (Osborne 2006:384). Mazur (2013:106) describes NPG as encompassing use of networks, multi-level governance, negotiation, involvement, partnership, discussion, agreement or compromise, reconciliation, autonomy and responsibility. Howlett, Kekez and Poocharoen (2017:490) identify NPG as involving co-production of services and extend public and private management (under NPM) to incorporate elements of public policy studies. In circumstances where co-production of services may be



deemed limited (for example tax collection), co-production under NPG may be used at the policy formulation stage by involving many stakeholders. Public policy in this instance may still attain service delivery outcomes in a reconfigured co-production arrangement (Howlett *et al.* 2017:490). NPG has therefore developed to be recognised as critical in public policy implementation and service delivery, given its attention to interorganisational relationships (Osborne 2010:144).

The conceptions on values, objectives and methodology by various actors and the timing of intervention are not linear in nature and differ among actors. Certain actors exhibit several mutual dependencies which induce some complexity and make it difficult to steer in one direction without compromises made. The effect of complexity on implementation of administrative reform and delivery of public services remains subjective (Haveri 2006:33). In addition, dynamic process management efforts are required to navigate complex interactions among various partners (Opara & Rouse 2019:82; Klijn 2009:31). **Table 2.3** summarises the paradigms discussed above.



**Table 2.3: Summary of the PA paradigms**

	<b>Traditional Public Administration</b>	<b>New Public Administration</b>	<b>New Public Management</b>	<b>New Public Service</b>	<b>New Public Governance</b>
<b>Theoretical Foundation</b>	<ul style="list-style-type: none"> <li>• Political science - bureaucratic system, political and administrative dichotomy</li> </ul>	<ul style="list-style-type: none"> <li>• Second generation of structural contingency theories</li> </ul>	<ul style="list-style-type: none"> <li>• Economics thinking - Rational or public choice, transactions cost and principal agency theories</li> <li>• Management Philosophy</li> </ul>	<ul style="list-style-type: none"> <li>• Theories of democratic citizenship</li> <li>• Community and civil society participation</li> <li>• Humanistic theory of organisation</li> </ul>	<ul style="list-style-type: none"> <li>• Organisational sociology and network theory</li> </ul>
<b>Year in which the theory was formulated</b>	<ul style="list-style-type: none"> <li>• Indicative period – 1800s</li> </ul>	<ul style="list-style-type: none"> <li>• 1971</li> </ul>	<ul style="list-style-type: none"> <li>• 1991</li> <li>• Late 1970s to early 1980s<sup>2</sup> but implemented in the 1990s</li> </ul>	<ul style="list-style-type: none"> <li>• 2000</li> </ul>	<ul style="list-style-type: none"> <li>• 2006</li> </ul>
<b>Nature of the State</b>	<ul style="list-style-type: none"> <li>• Unitary</li> </ul>	<ul style="list-style-type: none"> <li>• Unitary</li> </ul>	<ul style="list-style-type: none"> <li>• Disaggregated</li> </ul>	<ul style="list-style-type: none"> <li>• Plural and pluralist</li> </ul>	<ul style="list-style-type: none"> <li>• Plural and pluralist (more legitimate, inclusive, flexible)</li> </ul>
<b>Role of government</b>	<ul style="list-style-type: none"> <li>• Bureaucratic</li> <li>• Direct provision of services by government (Rowing)</li> </ul>	<ul style="list-style-type: none"> <li>• Policy-making and implementation</li> <li>• Steering organisational change</li> </ul>	<ul style="list-style-type: none"> <li>• Catalyst to support market forces (steering) -service inputs and outcomes)</li> <li>• Intra-organisational management</li> </ul>	<ul style="list-style-type: none"> <li>• Serving (creating shared values)</li> </ul>	<ul style="list-style-type: none"> <li>• Collaboration (co-production) and relationship management</li> <li>• Facilitating</li> <li>• Inter-organisational governance (with non-government actors and citizens)</li> </ul>

<sup>2</sup> Gruening, 2001:2

	<b>Traditional Public Administration</b>	<b>New Public Administration</b>	<b>New Public Management</b>	<b>New Public Service</b>	<b>New Public Governance</b>
<b>Role of citizen</b>	<ul style="list-style-type: none"> <li>• Leader</li> </ul>	<ul style="list-style-type: none"> <li>• Limited role – not enough concern for citizens</li> </ul>	<ul style="list-style-type: none"> <li>• Customer</li> </ul>	<ul style="list-style-type: none"> <li>• By the service of the citizens</li> </ul>	<ul style="list-style-type: none"> <li>• Participate in decision-making process</li> </ul>
<b>Recipient of public service</b>	<ul style="list-style-type: none"> <li>• Subjects</li> </ul>	<ul style="list-style-type: none"> <li>• Citizen</li> </ul>	<ul style="list-style-type: none"> <li>• Customer</li> </ul>	<ul style="list-style-type: none"> <li>• Client and citizen</li> </ul>	<ul style="list-style-type: none"> <li>• Citizen and customer</li> </ul>
<b>Public value orientation</b>	<ul style="list-style-type: none"> <li>• Hierarchy and procedures</li> <li>• Legitimacy and compliance</li> </ul>	<ul style="list-style-type: none"> <li>• Efficiency, efficacy</li> <li>• Social equity</li> <li>• Better quality public service</li> </ul>	<ul style="list-style-type: none"> <li>• Efficiency</li> <li>• Competition in the market place</li> </ul>	<ul style="list-style-type: none"> <li>• Desire to contribute to society</li> </ul>	<ul style="list-style-type: none"> <li>• Neo-corporatist or social democratic corporatism - economic tripartism – labour, business, government</li> <li>• Democracy and efficiency</li> </ul>

Sources: Xu *et al.* (2015:13); Pyun & Gamassou (2018:255-7); Osborne (2006:383); Howlett *et al.* (2017:489); Gruening (2001:3).

### **2.2.7 Summary of the public administration regimes**

PPPs have historically addressed infrastructure backlogs in many countries through long-term arrangements between government entities and private partners (Casady *et al.* 2020:162). The motivation for PPPs is the use of private sector management skills, innovation, access to capital and capability which results in cost-effective delivery (Casady & Geddes 2016:1). The motivation for PPPs is conceived to be aligned to NPM, given its desire to improve efficiency, augment internal operations of government agencies and outsource public services.

The nature of the partnership between government agencies and the private sector mimics some form(s) of a governance relationship emanating from the number of parties forming the private sector consortium. PPPs involve several private sector agents as part of the contract and this contributes to their complexity, given the multiple relationships among the parties (Hodge & Greve 2010:15). Klijn (2009:31) identifies PPPs as a “complex phenomenon”, with the private sector component having several players and simultaneously having multiple actors on the public sector side. Given the multiple players, coordination challenges are likely to emerge leading to “temporary marriages of convenience” (Opara & Rouse 2019:82; Klijn 2009:31). The complexity of PPPs is brought about not only by the involvement of many parties, but by each actor pursuing their own interest and having their own conception of the problem and how it will be addressed.

As discussed in the preceding section, NPG captures interrelatedness of both the policy-making and the implementation/service delivery processes and therefore PPPs may also be considered under the NPG paradigm (Osborne 2006:384). In this context, PPPs act as a tool of NPG for the delivery of infrastructure services through a complex network of government and private sector linkages (Casady 2020:162). NPG elevates the importance of the external social-political environment and simultaneously managing the complexity of the PPP arrangement. Complexity arises given a non-linear value system among parties to the PPP agreement which leads to unpredictability in managing the network (Haveri 2006:33). Howlett *et al.* (2017:490) identify NPG as involving co-production of services and this involves the collaboration of the public and private sector (PPPs). It is evident that PPPs may be delivered both under NPM and NPG. Mansour (2018:85) supports the complementary nature of NPM and NPG in that both strive to restructure the public

sector using principles of neoliberalism and globalisation, respectively. The significant variation relates to the degree of completeness, that is, NPM is more concerned with restructuring the administrative functions, processes and procedures, while NPG focusses upon thorough restructuring of socio-political and policy-making practices (Mansour 2018:85). In the context of PPPs, procurement and related activities may be the sole focus of NPM but the management of various stakeholders becomes the purview of NPG. Warsen, Klijn and Koppenjan (2019:375) note that PPPs succeed on the basis of networks (relational) and contractual arrangements. Relational attributes include trust, conflict management and existence of informal communication lines, and transparency among various actors is essential in making PPPs prosper. These relational attributes build-up some of the NPM features such as contracting to make NPG more encompassing. Contractual conditions include allocation of risks in the PPP and the enforcement of the contracts when parties fail to fulfil their responsibilities. Warsen *et al.* (2019:376) argue that contractual and relational characteristics are required to achieve high-performing PPP projects. Their proposition is that “specifying the exact combinations of contractual and relational conditions is crucial for successful PPPs,” and not only contractual as suggested by NPM (Warsen *et al.* 2019:375).

The next section discusses the role of the state to highlight some of the services that may be contracted to the private sector.

## **2.3 Role of the state**

This section discusses the role of the state and outlines under what circumstances the private sector provides public goods and services on behalf of government. Firstly, literature on the role of the state is presented and secondly, the South African perspective is highlighted.

### **2.3.1 Literature review on the role of the state**

Van der Waldt (2013:2) notes that the state originates in traditions, culture, ideology, history and environmental conditions, among others. Buchanan and Musgrave (1999:31) define the state as “an association of individuals engaged in a co-operative venture, formed to resolve problems of social co-existence and to do so in a democratic and fair fashion”. The state is modelled on the social contract theory

which asserts that the people and government agree to a set of rights and obligations. Citizens agree and give up some of their rights to ensure that government maintains order. Likewise, government agrees and guarantees the provision of certain services to its citizens (Van der Waldt 2013:2). The social contracts are reflected in the Constitutions of countries. Basheka and Auriacombe (2019:104) note that the Constitution specifies how power is organised within a state, placing boundaries on how power is exercised and how people in power abide by the laws and are accountable to citizens. Constitutionalism therefore encompasses rights, responsibility, accountability, legitimacy and democracy, among others (Asiimwe 2014:23).

The term government is based on “Anglo-American political theory and refers to the formal institutions of the state and their monopoly of legitimate coercive power” (Stoker 2019:15). This assertion reflects that government has the capacity to make and enforce decisions to maintain public order. The role of the state and government are closely related. Government is traditionally used as a synonym for “governance” or an activity of governing which refers to the exercise of authority over a territory, state, or an organisation (Stoker 2019:15). Rhodes (2007:1246) defines governance as much broader than government to include collaborations with other role players outside of government. In other words, governance is governing with and through networks of various actors. Governance has several uses which include “minimal state, corporate governance, new public management, good governance, a socio-cybernetic system and self-organising networks” (Rhodes, 1996:653).

Mörth (2009:192) argues that there is an analytical distinction between government and governance primarily on the basis of system of regulation and democratic ideas. Government system is based on strict and coercive rules (hard law) and strives in hierarchical structures. In a government system, elected officials set the rules while governance involves multiple authorities, extending the concept of government to include private actors and other non-state actors (Mörth, 2009:196). Given the multiple stakeholders, the regulatory process in the governance system culminates into soft law which erodes legal sanctions available under the government system. The democratic model under governance is rooted in societal values with open communication among various actors (Mörth, 2009:196). The distinction between

government and governance with respect to authority systems is summarised in **Figure 2.2**.

	Government	Governance
Modes of Regulation	Hard Law Public Law	Soft Law Private Law
Regulators	Public Actors	Public and Private Actors
Democratic Model	Representative and State-Centric	Deliberative and Based in Society
Democratic Reforms	Hierarchy and Parliamentarisation	Open Structures and Network-Building

**Figure 2.2: Authority systems: Government vs Governance**

Adapted from Mörth (2009:192).

Stoker (2019:16) concurs with Mörth (2009:196) and articulates five propositions on the broad issues covered by governance. Governance includes the following propositions:

- Institutions and stakeholders include those outside of government;
- Responsibility for addressing socio-economic concerns;
- Identifies power dependence involved in the relationships between institutions involved in collective action;
- Autonomous self-governing networks of actors; and
- Governance utilises social partners to achieve sustainable results.

Fourie (2015:106) asserts that the public sector through political processes sets the outcomes and the corresponding instruments. The political process involves policy direction which is equivalent to “steering” under the New Public Management paradigm (Rhodes 1996:653). These instruments used in steering include passing legislation or regulations and redistributing income through taxation or social security payments. Fourie (2015:106) further argues that governments promote fairness, peace and order, and international relations.

Thynne (2000:228) identifies some of the functions of government to include, preserving the rules of the game or rule of law (regulatory function), preventing coercion, protecting and fulfilling the rights of individuals and communities (protection function) and providing an environment in which markets and the economy operate without hinderance (enabling function). In practice, the regulatory, protection and enabling functions may be carried out simultaneously. For instance, government creates an enabling environment for businesses to prosper but at the same time places restrictions for businesses not to exploit consumers. An enabling environment should promote competition in the market. For example, government can introduce competition during the tendering process for PPPs to derive value for money and benefit from reduced costs and efficiency in the delivery of the services (HM Treasury 2015:13). To promote competition from overseas bidders, government can enact progressive PPP procurement laws that allow overseas bidders who may contribute additional sources of expertise, technology and finance. Competition brings about dynamism and efficiency in the delivery of public services whilst simultaneously deriving profits for the private partner (Beh 2010:77). Under conditions of effective competition, the transfer of risk between the private and public sector is improved for mutual benefit (Biygautane, Hodge & Gerber 2018:333).

Government intervention (regulatory function) is justified if a service is provided by a natural monopoly which may use its monopoly position to exploit customers. Government's regulatory function sets rules, monitoring mechanisms and bargaining processes between government and the monopoly provider to ensure incentives to invest so that efficient operations are carried out to protect the interests of the citizens. Regulatory measures are required to minimise exploitation arising from having a monopoly provider of services. One such measure would be creation of an independent economic regulator or independent consumer groups and associations acting as oversight bodies (European Commission 2003:9).

To undertake some of these functions, governments may utilise relationships within the public sector or private companies. The relationships may be structured and controlled by a contract or agreement which can take various forms such as 'within government', 'out of government', or 'beyond government' (Thynne 2000:233). Contracts between government entities are referred to as "within government", for example, the distribution of water to residents by Rand Water on behalf of the City of

Johannesburg. “Out of government” contracts involve private operators or civil society delivering public goods or services on behalf of government for compensation, for example, public private partnerships reflect the most common form of “out of government” (Rhodes 2007:1246; Fourie 1998:235). Out of government is equated to the concept of minimal state which advocates the use of markets to render public services at low cost (Rhodes 1996:653). “Beyond government” contracts refer to rights acquired by the private sector through an auction or tender for the provision of a service, for example, auctioning of a spectrum by government for the telecommunications sector (HM Treasury 2015:13; Beh 2010:77; Howlett & Ramesh 1995:94).

Lawrence and Abramson (2014:4-5) identify the role of government as (i) producer, (ii) regulator, (iii) infrastructor, (iv) scientist and (v) collaborator. In its role as a producer, government decides on the relevant inputs required to achieve desired outputs to satisfy the citizens or consumers (Lawrence & Abramson 2014:75). The regulator role of government involves a constant balancing act between the needs of the citizens and their economic well-being. Government as a regulator operates in a complex political environment, with unexpected events which require frequent interaction with stakeholders (Lawrence & Abramson 2014:110). Infrastructor is a term used by Lawrence and Abramson (2014:132) to reflect the role of government as facilitating development and the enhancement of economic infrastructure in the country. The role of infrastructor requires skills such as a producer, an engineer and an instructor. Government’s role in research and development was captured as “scientist” whose overall objective is to have solutions for the betterment of its citizens (Lawrence & Abramson 2014:151). Government plays the role of a collaborator as partnerships with society, other public entities, local municipalities and the private sector are important. Partnerships are particularly important for small government agencies with limited budget and collaborations are useful to leverage additional funds to fund government programmes (Lawrence & Abramson 2014:172-173).

In his seminal work of 1959, Musgrave proposes three distinct roles of the state, namely (i) an allocative role, (ii) a distributional role and (iii) a stabilisation role (Jackson 2009:29). The allocative role of the state involves addressing inefficiencies in the market (correcting market failure) through mechanisms such as regulation,



taxation and subsidies (Ciccarone 2020:82). The distributional role of the state seeks to achieve equitable access for all citizens and this role forms the foundation of the “welfare state” (Ciccarone 2020:83). Mechanisms used to achieve distributional effects include progressive taxation, subsidies and regulation. The stabilisation role of the state constrains the free rein of the markets by influencing the markets by changing public spending and taxation to either expand or control effective demand in the economy (Jackson 2009:29; Ciccarone 2020:84).

### **2.3.2 South African’s perspective**

In South Africa, the responsibilities of the state and government are reflected in the Constitution of the Republic of South Africa, 1996 (hereafter referred to as the Constitution). The Bill of Rights as captured in the Constitution is the cornerstone of the democratic state. The state is responsible for fulfilling the stated rights which include among others; “housing, health care, food, care, education, justice, water and social security”. The Bill of Rights and Section 7 of the Constitution assign the role of the state to “respect, protect, promote and fulfil the rights of citizens.” The Bill of Rights as prescribed in the Constitution is aligned with what the literature portrays the role of government to be as discussed above. Public administration in South Africa is governed by democratic principles which include the following (Phago 2018:107):

- superior professional integrity;
- promotion of economic, efficient and effective resource utilisation;
- development focus;
- transparency and accountability;
- receptive to citizen needs; and
- the equitable distribution of available resources.

Section 40 of the Constitution provides for a “three-sphere system of government, namely national, provincial and local spheres, which are distinctive, interdependent and interrelated.” These three spheres of government are assigned different roles and responsibilities, and some functions are exclusive to one sphere while other functions have concurrent jurisdiction. The configuration of the three spheres of

government is meant to simplify government functions to achieve set goals (Phago 2018:106).

National and provincial government have concurrent competence on education, health services, housing, public transport, trade and policing, among others. National and provincial governments play the following roles: a strategic role, a developmental role, a regulatory role, an intergovernmental role, an intervention role and a capacity building role. In fulfilling its role of protecting citizens, national government may intervene in cases where the provincial government fails to fulfil its constitutional responsibilities. Section 100 of the Constitution stipulates a mechanism for intervention which is meant to restore, maintain efficient administration and facilitate provision of basic services (Phago 2018:106).

Equally, provinces and municipalities have concurrent responsibilities for providing health (primary health at municipal level), social services, human settlements (housing) and infrastructure services (roads). The annual division of revenue (DOR) makes provision for equitable distribution of funding to provinces and local government to facilitate the delivery of basic services. Section 139 of the Constitution outlines the process by which provincial government may intervene in instances of failure or inability to meet constitutional responsibilities by local government. The provincial intervention seeks to ensure that citizens are provided with quality services while the municipal challenges are being addressed. Masuku and Jili (2019:6) identify political interference in municipal administration, abuse of power by politicians, and employment of incompetent administrators for political and self-interest as some of the main challenges at local level which leads to municipalities being placed under provincial intervention.

Local government has exclusive competence on the “provision of services such as municipal water and sanitation services, electricity reticulation, municipal public works and municipal public transport”, among others (Madumo 2012:44). Local government directly interfaces with the daily lives of the residents (Madumo 2012:44). Flowing from the Constitution, the White Paper on Local Government (1998) expanded the provisions in the Bill of Rights and introduced the concept of developmental local government. Developmental local government is defined “as local government that is devoted to partner with residents and society to find

sustainable solutions to address the social, economic and material needs of citizens” (Madumo 2012:46). Local government was envisaged to have a significant role in providing the link with communities, as well as catering for the marginalised members of society from the history of colonisation and apartheid (Madumo 2012:41). Van Dijk and Croucamp (2007:672) identify some of the principles anchoring developmental local government:

- Increasing social development and economic growth;
- Improving coordination;
- Development should be democratised; and
- Education and leadership.

The White Paper on Local Government (1998) explains that the proximity of local government to residents provides flexibility in crafting solutions for the local economy. Local government provides impetus for local economic development by supporting business activities, infrastructure development, approval of plans and supporting cultural activities, among others. Local government as the “face of government” coordinates government activities provided by provinces and national government. Poor coordination often results in duplication of efforts and inefficient use of resources. The promotion of democracy at local government was a vital principle in the White Paper on Local Government, 1998. Participation in local government activities by communities fosters social cohesion and builds trust between government and the community. Community partnerships such as the Extended Public Works Programme (EPWP) create employment opportunities and skills development and mitigate poverty. The EPWP assists in local economic development in a municipal area (Madumo 2012:49).

In summary, the role of the state can be categorised as protector, enabler, regulator, provider of services and collaborator, among others. The Constitution of South Africa articulates the functions of the state and provides mechanisms for intervention in case of failure to meet defined obligations. In fulfilling its functions, government has many avenues that it can utilise to meet its constitutional responsibilities. It may provide the services directly or utilise partners as outlined in the NPG section above. One such mechanism is the use of the private sector via PPPs. The next section

focuses on the theoretical underpinnings of PPPs for proper positioning within public administration.

## **2.4 Theoretical underpinnings of Public-Private Partnerships**

The preceding sections focussed on the paradigms and evolution of public administration and a discussion on the role of the state. From these preceding sections, PPPs are categorised as potentially belonging to the NPM and NPG era. Furthermore, the use of private capital to deliver public services is an alternative delivery mechanism available for government based on different reasons. This section firstly discusses the generic functions of public administration with the sole purpose of positioning PPPs within these functions. Secondly, the theoretical basis for PPPs as a service delivery mechanism is discussed, expanding on the earlier exposition of the various paradigms in public administration.

### **2.4.1 Generic functions of Public Administration and PPPs**

The concept of management and what public sector managers do has evolved over time. The “classic” forms of management started with Frederick Taylor, an engineer by profession, and then Henri Fayol, an industrialist, followed by Luther Gulick who was an administrator by profession, and this influenced his thinking which was more practitioner focussed (Chalekian 2016:316, 321). In 1937 Gulick developed a framework that identified key elements in organisations that may be used to define roles of managers or administrators. Accordingly, Gulick coined the word POSDCORB, to delineate the functional roles of a typical chief executive officer in an organisation (Chalekian 2016:318). POSDCORB is short hand for “**P**lanning, **O**rganising, **S**taffing, **D**irecting, **C**oordinating, **R**eporting and **B**udgeting.” Since POSDCORB, there are arguments pointing to evolving tasks of managers in the public sector accommodating new skills required under collaborative management. Consequently, this led to diverse managerial tasks and activities required under collaborative management (Bartelings, Goedee, Raab & Bijl 2017:342). The work of Mintzberg (1973) is instructive as it encompasses significant elements required for collaborative managerial tasks such as the ability to work in teams, to manage and solve conflicts, the analysis of information, informed decision-making and efficient allocation of resources. Mintzberg contends that the roles of managers reflect three broad categories, namely interpersonal, informational and decisional, and the

application of these roles varies depending on the functional area of the manager (Bartelings *et al.* 2017:347).

Cloete (1998:85) posits Public Administration as largely involved in internal administrative processes of government which include generic administration functions, auxiliary activities, instrumental activities and line functions. Auxiliary functions include research, legal services and public relations, while instrumental functions involve personal (communication, decision-making) and interpersonal (provision of offices and other tools of the trade). Line functions or functional activities are groupings created based on occupations, for example, library services, nursing and engineering. The generic administrative processes entail the following functions: policy-making, organising, financing, staffing or personnel administration, control, procedures or work methods and management. Cloete (1998:85) justifies the use of the term generic to reflect that these functions are universally performed in all public institutions with some adaptations to suit the context of the public institution. Cloete's generic functions are aligned to Gulick's POSDCORB and Mintzberg's frameworks in that the auxiliary activities, instrumental activities and line functions cover the skills required for collaborative managerial tasks.

The generic functions are discussed below with much emphasis on financing, policy-making and control, as they are directly linked to PPPs. The generic functions are cross-cutting and dependent on one another as described below.

### *Policy-making*

Policy-making is considered as the first and most basic function for any public institution and it determines what an institution seeks to achieve and then determines the means of attaining these objectives (Thornhill & Cloete 2014:84). Thornhill (2012:59) argues that when political heads consider introducing a new policy, the role of the public sector managers or appointed officials is critical. Any policy-making process has to consider the administrative implications and capacity for the public sector employees to execute such a policy (Lawton & Rayner 2016:4). This inadvertently leads to bureaucrats playing a role in policy-making, as managers have to consider human capacity, availability of the funds and whether the organisational structure supports implementation of the policy. Bureaucrats have to put in place

implementation and monitoring of executive actions and determine work procedures to deliver efficiently and effectively. These considerations demand the interaction of politicians and bureaucrats and for public officials to provide technical, administrative and managerial skills to reach their policy objectives (Thornhill 2012:60).

The system of local government in South Africa places the responsibility of approving plans on municipal councils (elected officials), but the administrative responsibility of preparing all the plans and tabling them at council rests with the senior officials in the municipality. In the context of this study, elected officials determine the budget priorities and appointed officials prepare budgets and propose mechanisms of raising funding which may include PPPs for the financing of infrastructure projects. In South Africa, municipal councils are required to consider and approve the budget including the financing options in accordance with the MFMA. Equally, officials are required to prepare the budget proposal and table it before Council after discussion with the mayor and other full-time councillors.

### *Organising*

Organising and planning are important administrative activities of bureaucrats and involve identifying the tasks to be accomplished and the corresponding method(s) to achieve the defined tasks (Chalekian 2013:9). Formal structures of authority are defined to support the execution of the tasks and work is distributed in a manner that facilitates coordination among co-workers (Chalekian 2013:10).

### *Staffing*

Staffing is sometimes seen as synonymous with personnel management or human resource management. The delivery of public services is done by human beings to give effect to the policy direction formulated by the political executive (Thornhill 2012:64). Staffing involves recruitment, retaining, staff development, performance review, staff rewards and discipline of employees with the objective of achieving organisational objectives (Horton 2009:121). The management of personnel varies across countries but in general the policies such as recruitment, pay structure, conditions of service and progression are determined by political heads. Political heads also rely on the advice of public sector officials in formulating policies and the senior officials are fully aware of the political trade-offs of each policy choice

(Thornhill 2012:64). Staffing functions in the public service have the following features (Horton 2009:121):

- Significant administrative activities;
- Standardised employment procedures; and
- Authoritarian style of management.

### *Control*

Managers are responsible for directing work of subordinates through the use of various pieces of data/information at their disposal (Bartelings *et al.* 2017:344). Control involves coordination and collaboration of various tasks to achieve set goals (Chalekian 2013:13).

### *Management*

Management is an overarching phrase to describe activities such as planning, budgeting, performance management and people management in the daily operations of public institutions (Lawton & Rayner 2016:1).

### *Financing/Budgeting*

The budgeting framework within the public sector dictates that budget allocation is required before any expenditure can take place. The process followed for any expenditure to be incurred involves adherence to approved budget, collection of income, safekeeping of records, procurement of services and accounting for the money spent (Thornhill & Cloete 2014:100). Oyewo and Adyeye (2018:3) observe that the budgeting process in government involves budget preparation, the budget approval phase, budget implementation and the monitoring phase. Most of these activities are the responsibility of the public officials in various government departments with the budget approval and monitoring done by legislatures.

#### **2.4.2 Link between generic functions and PPPs**

PPPs by their nature represent a form of strategic public procurement process (equivalent to financing mechanisms) in which the private partner takes significant risk by incurring upfront project costs and delivers public services on behalf of government (Roman 2015:1). Public procurement via PPPs fits into financing as one of the generic functions of Public Administration. In South Africa, PPPs at the local government sphere fall under supply chain management provisions (Section 120 of



the MFMA). Fourie (2018:734) notes that supply chain management is a procurement mechanism that seeks to ensure transparent and accountable flow of goods and services from the service provider to a public entity to achieve value for money, empowerment objectives and decent service delivery. In South Africa, the supply chain management principles are embedded within socio-economic development and transformation objectives.

Equally, procurement and implementation of PPPs must follow procedures and regulations, which is another generic function associated with Public Administration. Municipal PPPs in South Africa should comply with the following legislation: the MSA, the MFMA and the Municipal Service Delivery and PPP Guidelines of 2005. Section 46 of the MFMA outlines the applicable framework for the raising of funding by municipalities.

Cloete's work on Public Administration's generic functions was criticised for ignoring the influence of politics, economics and the social context on Public Administration (Cameron 2008:45). Cameron's assertion was based on the influential writings of Dwight Waldo which elevated the influence of politics and policy as embedded in government administration. Despite this criticism, Cloete provided a framework for understanding more broadly the functions of public administration.

#### **2.4.3 Core theories of public administration research and PPPs**

Given the delivery of public goods by the private sector based on their perceived efficiency, the meta-theory or paradigm to be considered in this study is New Public Management (NPM). Several substantive theories may be used to support NPM and these include principal agency theory, public choice theory and public good theory, among others (see

**Table 2.4**). NPM meta-theory is chosen for the study due to the limited availability of funding by government to provide basic water services to the citizens. The traditional public management role which focussed on the generic administrative processes or functions of government would not be an appropriate meta-theory for the study. NPM meta-theory is associated with market-like mechanisms which introduced the delivery of public goods by the private sector. NPM saw the increased role of the



private sector in the delivery of public goods and services to drive efficiency, and concerns around privatisation became apparent. The driving force for the introduction of NPM was the financial crises (Thornhill & van Dijk 2010:104) which required alternative service delivery methods with existing budgets, in other words, doing more with less (Osborne 1993:350).

Van der Waldt (2017:192-200) provides a framework to assist in selecting theories to consider when studying a defined phenomenon. The framework has 10 themes but for the purposes of this study only 3 themes are relevant: public service delivery, public policy and financial and supply chain management as summarised in

**Table 2.4.** The implementation of PPPs in South Africa follows well defined processes, procedures and principles as prescribed in the MFMA and the Municipal PPP Regulations. One of the critical principles for PPP is the determination of value for money.

**Table 2.4: Core theories for Public Administration research**

Unit of analysis or focus of study	Meta-approach or key issues	Grand and substantive theories
<b>Theme 6: Public service delivery</b>		
Systems and Procedures	<ul style="list-style-type: none"> <li>• New Public Management</li> <li>• Outsourcing</li> <li>• Public-private partnerships</li> <li>• Commercialisation</li> <li>• Privatisation</li> </ul>	<ul style="list-style-type: none"> <li>• Public good theory</li> <li>• Motivation theory</li> <li>• Social Equity theory</li> </ul>
Principles	<ul style="list-style-type: none"> <li>• Public sector values</li> <li>• Good governance</li> <li>• Service liability</li> <li>• Transparency and openness</li> <li>• Responsiveness and accountability</li> </ul>	<ul style="list-style-type: none"> <li>• Public good theory</li> <li>• Social contract theory</li> <li>• Decision theory</li> <li>• Rational choice theory</li> <li>• Public value theory</li> <li>• Public choice theory</li> </ul>

Unit of analysis or focus of study	Meta-approach or key issues	Grand and substantive theories
		<ul style="list-style-type: none"> <li>• Social exchange theory</li> </ul>
<b>Theme 9: Public Policy</b>		
<ul style="list-style-type: none"> <li>• Design</li> <li>• Implementation</li> <li>• Analysis</li> <li>• Statutory and regulatory framework</li> </ul>	<ul style="list-style-type: none"> <li>• Administrative law</li> <li>• Constitutional dispensation</li> <li>• Public good</li> <li>• Well-being</li> <li>• Societal values and norms</li> <li>• Political dynamics</li> </ul>	<ul style="list-style-type: none"> <li>• Social contract Theory</li> <li>• Contingency theory</li> <li>• Public value theory</li> <li>• Public choice theory</li> <li>• Rational choice theory</li> <li>• Dialogic communication theory</li> <li>• Knowledge gap theory</li> <li>• Group theory</li> <li>• Social interaction theory</li> <li>• Muted group theory</li> <li>• Spiral of silence theory</li> <li>• Expectancy value theory</li> <li>• Social penetration Theory</li> <li>• Political Systems theory</li> <li>• Principal agency theory</li> <li>• Organisation theory</li> <li>• Game theory</li> </ul>
<b>Theme 10: Financial Management and Supply Chain Management</b>		
<ul style="list-style-type: none"> <li>• Procurement</li> </ul>	<ul style="list-style-type: none"> <li>• Keynesian economics</li> </ul>	<ul style="list-style-type: none"> <li>• Public value theory</li> </ul>

Unit of analysis or focus of study	Meta-approach or key issues	Grand and substantive theories
<ul style="list-style-type: none"> <li>• Budgeting</li> <li>• Allocation</li> <li>• Distribution</li> <li>• Revenue generation and collection</li> <li>• Auditing and accounting</li> </ul>	<ul style="list-style-type: none"> <li>• Wealth of nations</li> <li>• Weber: Protestant ethic</li> <li>• Das Capital/ Communist Manifesto</li> <li>• Budgeting as political instrument</li> <li>• Welfare versus prosperity/market driven economic approaches</li> <li>• Fiscal and monetary policy approaches</li> <li>• Stabilisation Economic growth/wealth creation</li> </ul>	<ul style="list-style-type: none"> <li>• Stewardship theory</li> <li>• Public choice theory</li> <li>• Economic theory</li> <li>• Theories on public accountability</li> <li>• Decision theory</li> <li>• Agent theory</li> <li>• Rational choice theory</li> <li>• Human capital theory</li> <li>• Contingency theory</li> <li>• Scientific management theory</li> </ul>

Source: Van der Waldt (2017:192-200).

Wang, Xiong, Wu and Zhu (2018:299) reviewed several Public Administration articles published in journals which explored the concept of PPPs to identify the theories used. The study identified many theories have been used to support privatisation and PPPs. The theories identified include transaction cost theory (14 per cent of the articles), principal agent theory (11 per cent), network-oriented perspective (11 per cent), NPM (8 per cent), institutionalist theory (8 per cent), governance theory (8 per cent), property rights theory (5 per cent), public choice theory (3 per cent), stakeholder theory (3 per cent), and organisational theory (3 per cent), among others.

Wang *et al.* (2018:299) identified three disciplines and the corresponding theories associated with the field of study. Firstly, PPPs are analysed from an economics perspective with the following theories:

- Transaction costs theory which “is concerned about the optimal governance structure of transactions”;
- Property rights theory “dealing with limitations of PPP contracts”; and

- Principal agent theory which focusses on “the incentive problems caused by information asymmetry between public and private parties.”

Secondly, PPPs were analysed from a public management and policy perspective with the following theories:

- Network and governance theories which are concerned with “the cooperation mechanisms between public and private sectors; and
- Public choice theory and NPM focus on the extent of rivalry (competition) by firms to render public services.

Thirdly, PPPs were analysed from an organisational management discipline with the following anchoring theories:

- Stakeholder theory which advocates for the balancing of potential benefits of PPPs for all actors; and
- Institutional theory which underscores the notion that PPPs should be treated as an “institution” to gain legitimacy which subsequently leads to improved efficiency.

There is convergence and divergence between the theoretical framework by Van der Waldt (2017:192-200) and the analysis of journal articles involving PPPs undertaken by Wang *et al.* (2018:299). The common theories and paradigms identified by the authors are NPM, principal agency theory, public choice theory, governance theory, stakeholder theory and organisation theory. Some of these theories are explained briefly below with the principal agent and public choice theories discussed in detail as the anchor for the study.

#### **2.4.4 Transaction Cost Theory**

Wang *et al.* (2018:299) argues that transaction cost theory (TCT) has roots in the field of economics based on the work of Olivier Williamson and “is concerned about the optimal governance structure of transactions”. Dagdeviren and Robertson (2015:1707) posits that the governance structure of transactions are explained by the costs and attributes associated with such a structure. In other words, the selection of the competing or alternative governance structures is informed by

different transaction costs and the need to minimise risks such as opportunism (self-interest), and weak property rights and institutions (Dagdeviren & Robertson 2015:1710). In the context of PPPs, TCT is applicable when determining whether transaction costs of delivering the service, for instance water, is cost effective under public or private governance system. In some cases, low transaction costs may not always translate to lower overall costs (Dagdeviren & Robertson 2015:1715).

The transaction cost theorists argue that PPPs induce additional costs due to complexity, a prolonged tendering phase, complex financing structures and limited government contracting skills (Reeves *et al.* 2017:1073; Dudkin & Väililä 2006:309). The capacity of the government to successfully conclude PPP contracts involves significant costs as government may have to rely on external advisors due to scarce skills in the public sector (Boyer & Newcomer 2015:132). The lack of skills (such as engineering, legal and project finance) in the public sector increases costs of PPPs as bureaucrats may have to rely on private sector experts to deal with complex negotiations and finalise commercial agreements. The private sector may take an opportunity to derive higher rents due to the limited skills in the public sector (Saussier, Staropoli & Yvrande-Billon 2009:13).

Transaction costs vary from three to five per cent of the total contract value for countries with well established PPP frameworks and this can increase to between 10 to 12 per cent in new or pioneering projects (Saussier *et al.* 2009:10; Dudkin & Väililä 2006:311). The implication of the high transaction cost is that it may discourage government to undertake projects through PPPs, especially if the likely benefit from PPPs versus traditional procurement is uncertain (Reeves *et al.* 2017:1080). The TCT is further expanded in section 2.7.6 under problems with PPPs.

#### **2.4.5 Governance Theory**

Governance theory is concerned about the manner in which collective decisions are made, that is, the process involved in reaching a mutual and group decision (Chhotray & Stoker 2009:3). Governance refers to the rules that parties agree to (rules of the game), that is, who is responsible for execution and takes responsibility for certain activities in a PPP arrangement (Skelcher 2010:292). Skelcher (2010:293)

outlines four facets of governance, namely legal governance (conformity to the law), regulatory governance (system of rules), democratic governance (accountability) and corporate governance (procedures of decision-making).

The use of a private partner to deliver services on behalf of government alters democratic arrangements in the eyes of the public (Opara & Rouse 2019:80; Coghill & Woodward 2005:89). This is so because citizens may be of the view that they have to engage with private partners to meet their service needs as opposed to interacting with their elected officials (Opara & Rouse 2019:80). PPPs change the relationship from public to private sector provision of services and equally from serving citizens (public sector) to customers (private sector) (Opara & Rouse 2019:80; Coghill & Woodward 2005:89). The democratic rights and privileges of citizens under public sector provision of services are diminished to conform to the dictates of the market forces associated with the private sector (Coghill & Woodward 2005:89).

In the context of PPPs, citizens may consider the use of a private partner as a service delivery mechanism inducing some governance uncertainty and blurring of accountability lines between government and the private partner. Government can blame its private partner for failure to deliver services and vice versa as citizens may not be privy to the contractual details of the PPP arrangement (Opara & Rouse 2019:80). The use of PPPs and channelling public funds through private funds reduces transparency and accountability in government processes (Hall 2015:27). Despite all of the concerns of lack of government accountability in PPPs, Morth (2009:193) argues that it is still possible to achieve democratic legitimacy in PPPs based on the contractual agreement between the parties.

#### **2.4.6 Stakeholder Theory**

A stakeholder for an organisation is defined as “any group or individual who can affect or is affected by the achievement of the organisation’s objectives” (Zhu, Sun, Wang, Sun & Yu 2019:910). Given the diverse interests of stakeholders, self-interest is bound to inform and shape their positions which may lead to some conflict if not managed well. Stakeholders and different actors (collaborators) may be involved in policy formulation, implementation and delivery of services. These stakeholders and

actors include national, regional, provincial and local governments, political formations, non-profit organisations, special purpose interest groups and private sector institutions, citizens, business, media and trade unions, among others (Benton 2013:220; Loffler 2009:219). PPPs by nature involve several actors whose actions are guided and motivated by self-interest. Self-interest motive with multiple actors creates a conducive environment for conflict to arise. PPPs are complex and challenging given the multiple actors involved (Chowdhury & Chowdhury 2018:54; Mouraviev & Kakabadse 2015:775; Klijn 2009:31). The complexity of PPPs is brought about not only by the involvement of many parties, but by each actor pursuing own interest and having own conception of the problem and how it will be addressed (Opara & Rouse 2019:82; Klijn 2009:31).

In addition to pursuit of self-interest by various parties to the PPP arrangement, the different set of values for each of these stakeholders adds to complexity as postulated by the stakeholder theory (Mouraviev & Kakabadse 2015:775). PPPs represent a set of relationships involving many private partners under a common special purpose vehicle with the public sector. PPP arrangements can therefore be considered as a cooperative effort for the purpose of deriving benefits to the various stakeholders, but this does not negate their differences in values (Mouraviev & Kakabadse 2015:774). Accordingly, stakeholder theory postulates that when facing conflicts, stakeholders tend to converge on solutions that maximise utility for stakeholders through exercising shared rules and norms. These norms and rules go beyond strict self-interest (Zhu *et al.* 2019:910).

#### **2.4.7 Organisation Theory**

An organisation is defined as a “social entity that is goal-focussed, deliberately structured into coordinated activities and inherently linked to the external environment” (Daft 2013:13). The origins of organisation theory can be traced back to the need to understand and explain how institutions or organisations, industrial and commercial bodies conduct their daily activities (Bush 2015:35). Organisation theory is argued to be anchored on the works of Max Weber’s bureaucratic theory and classical public administration (Katsamunskia 2012:74). The role of bureaucrats

was treated as non-actors emanating from the historical disciplinary split between public administration and political science (Sorensen 2002:699).

In the context of PPPs, an organisation considering its self-interest, has to determine the manner in which a PPP project is implemented. Schomaker (2020:808) argues that cooperation models in PPPs vary in respect of design or structure to create a balance between the managerial independence of the private partner and to foster accountability of government. This balance is informed by the organisational preferences based on self-interest. Cooperation may mean demarcation or separation of responsibilities (horizontal relations) or shared responsibilities between the parties (Schomaker 2020:809; Mörth 2009:190). PPP contract types include “service contracts, management contracts, lease contracts, build-operate-transfer (BOT) and similar arrangements, concessions and joint ventures” (Ham & Koppenjan 2002:604). The level of private sector involvement varies depending on the contract type. The greater the risk allocated to the private partner, the more control ascribed to the private party and vice versa. This ultimately determines the structure of the PPP arrangement with significant compensation attributed to the primary party due to risk escalation.

#### **2.4.8 Public Choice Theory**

Public choice theory (PCT) is the main theoretical framework that influenced the new public management reforms which promote marketisation of public service provision such as outsourcing and privatisation (Pestoff 2018:30; Lukomska-Szarek & Wloka 2013:282; Boyne 1998:695). PCT is founded on economic theory (microeconomics) and used as a paradigm to study politics. PCT utilises economic tools and principles to explain how public sector institutions work and how the incentives of public officials influence decision-making. This classic economic theory postulates that humans are rational decision makers (“homo economicus”) and act in their best interest (Veronesi, Kirkpatrick & Altanlar 2019:195; Grofman 2004:32). PCT is also contextualised as the “application of welfare economics to political analysis” with the underlying economic principles drawn from the work of “political economists Adam Smith and David Ricardo in the 18<sup>th</sup> Century” (Piano 2019:290; Weschler 1982:289). PCT is described as a subdiscipline between the economics field and political



science which led it to the named political economy theory (Mueller 2015:386; Boardman & Vining 2012:122; Buchanan 1996:11).

PCT challenges the notion that elected officials and bureaucrats always make decisions based on citizens' needs or in favour of what is best in public interest. Put differently, PCT contests the public interest theory of democratic government, which assumes that decision-making in government is driven by egotistic benevolence of politicians or bureaucrats (Nayar [sa]).

PCT is primarily focussed on nonmarket decision-making given the limitations of the market forces to address welfare needs, and at the same time being sceptical of government's ability to improve market-based outcomes (Piano 2019:291; Ostrom 1975:844). Several authors (Zamir & Sulitzeanu-Kenan 2018:580; Gruening 2001:5; Buchanan 1996:12) identify public choice theory as based on the behaviour of individual actors in pursuit of their own interests and preferences. Piano (2019:306) associates PCT with the incentives faced by elected officials, how politicians position those incentives, and how citizens or rational economic agents respond to the incentives of politicians. Widmalm (2016:130) asserts economic incentives as postulated by PCT, which inform human actions, and this leads to interference of public interest objectives. Individual actors may include voters, politicians running for office, elected office bearers, members of different political formations, lobbyists and appointed public administrators. Lomasky (2012:327) observes that PCT produces political outcomes as law makers, bureaucrats, lobbyists and voters are described as the "*dramatis personae* of politics".

Public choice theory attempts to explain the complex institutional interactions that occur between the bureaucracy and elected leadership on one hand, and within the bureaucracy and among elected representatives on the other hand. The complex institutional interactions may take several forms as individuals are thought to always want to maximise personal benefits. Zamir and Sulitzeanu-Kenan (2018:580) argue that the premise of self-interest by politicians or bureaucrats rules out direct concern of citizens' welfare unless the needs of the citizens affect their self-interest. Within the public administration, bureaucrats play a crucial role such as proposing budgets which are then approved by the political leadership (Erkoc 2013:7). As such, PCT postulates that bureaucrats are motivated by rent seeking behaviour and may

expand budgets which include salaries as opposed to approving budget transfers to third party organisations because budget increases serve their self-interest (Veronesi *et al.* 2019:195).

Bureaucrats maximise budget in two ways: (i) further expansion in the number of administrators (also called bureau-shaping); and (ii) improve employment benefits of administrators and bureaucrats themselves (such as pay and employment stability) (Veronesi *et al.* 2019:195). This observation was articulated in the earlier works of Niskanen in 1971, after witnessing the growth in public expenditure which outpaced the requirements of the citizens leading to oversupply of services. This phenomenon is referred to as “empire building” spearheaded by bureaucrats to maximise their own benefits and fulfil egoistic behaviour (Veronesi *et al.* 2019:195). The reason why bureaucrats are able to undertake empire building is that elected officials that have responsibility of approving organisation structure have limited information of the daily activities of the bureaucrats (Warsen, Nederhand, Klijn, Grotenbreg & Koppenjan 2018:376). Information asymmetry between the bureaucrats and politicians results in empire building as bureaucrats are able to expand budgets and human resources beyond optimal levels required by the organisation (Ciccarone 2020:84). Information asymmetry may be exploited in a strategic manner by the bureaucrats (Warsen *et al.* 2018:376; Ciccarone 2020:84; McCue & Prier 2008:4). The exploitation of information asymmetry by either the bureaucrats or politicians does not always arise, especially in cases where the politicians and bureaucrats decide to collude or form strategic alliances to the detriment of public interest or voters (Ciccarone 2020:84). However, such an alliance leads to corruption and exacerbates market failure and inefficiencies (Ciccarone 2020:84).

Bureaucrats face peculiar problems in that they are government officials (employees) and simultaneously they represent the interests of the government as an employer. In addition, bureaucrats are part of the electorate as a voter and given the self-interest motive, bureaucrats’ pecuniary interest as an employee rises above the interest as an employer (Benson 1995:2). The implication of this dual relationship is the increase in government’s wage bill, as the bureaucrat as voter derives more benefit from increases in perks as compared to minimising the budget – this is akin to empire building discussed earlier (Warsen *et al.* 2018:376; Benson 1995:2).

Elected officials, similar to bureaucrats, harbour own interests as postulated by the PCT. Elected officials' incentive is to control budget allocation and determine how the budget will be utilised to advance their political ambitions (Piano 2019:306). Both politicians and bureaucrats can be characterised as subspecies of *Homo economicus*, with politicians undertaking activities calculated to secure maximum votes (Stilwell 2012:206). Politicians pursue policies that seek to satisfy the demands and aspirations of the electorate and special interest groups in order to secure votes (Owusu-Ansah *et al.* 2018:941).

Despite these complex and varied interactions, William Niskanen's work, *Representative Government and Bureaucracy* published in 1971, provides useful guiding principles to understand the theory. The tension between the representative government (elected officials) and bureaucracy is based on the need to control and determine how public funds are utilised or allocated (Piano 2019:306; Aucoin 1990:116). The self-interest concern led Niskanen, one of the proponents of PCT, to interrogate whether government was the most suitable provider of public goods and services, given the inherent assumption that public service bureaucracies are characterised by risks and moral hazards (Veronesi *et al.* 2019:195). Preference of the market forces over the public sector delivery mechanisms started to emerge and this was based on the need to enhance choice, flexibility, innovation and to improve customer service (Ciccarone 2020:86; Veronesi *et al.* 2019:195). The motivation for the delivery of public services by non-state actors was based on the view that bureaucrats have little interest to minimise costs as no financial gain flows from such efforts, given that budgets are allocated by government (Costantinos 2018:5). In comparison to the private sector, bureaucrats have no incentive to reduce expenditure and would rather request additional budget to promote empire-building. In this regard, PCT advocates for market-based mechanisms despising the inefficiencies of government monopolies (Costantinos 2018:5).

PCT is founded on the following assumptions:

- The unit of analysis is an individual to capture the notion of self-interest. On the contrary, groups are "conceived in terms of probabilities of individual choice and action" (Piano 2019:290; Zamir & Sulitzeanu-Kenan 2017:579; Benson 1995:2);

- An individual is assumed to be rational with the objective of maximising utility or needs (Piano 2019:290; Wagner 2019:640; Zamir & Sulitzeanu-Kenan 2017:579; Benson 1995:2; Petracca 1991:289; Scaff & Ingram 1987:617);
- Individuals are always informed about their preferences which they can rank, compare easily, and ranking is logically consistent (Zamir & Sulitzeanu-Kenan 2017:579); and
- Individuals are utility maximising seeking larger benefits at minimum costs (Zamir & Sulitzeanu-Kenan 2017:579).

The acceptance by government to use PPPs can be another source of self-interest, in that governments may leverage infrastructure delivery by the private actor for political benefit or maximise chances of re-election (Piano 2019:306; Costantinos 2018:5). Governments routinely seek to obscure their level of spending and PPPs provide that avenue, as most of the costs are paid upfront by the private partners (Borcherding, Ferris & Garzini 2004:80). If the political costs of direct taxation and expenditure increase due to debt and deficits, governments will move to more opaque methods of raising revenue or expenditures which may include PPPs as it is largely off-balance sheet funding. Off-balance sheet funding is attractive for politicians as it obscures real costs of infrastructure projects (Henckel & McKibbin 2010:6; Sauer 2001:10). Consequently, the use of PPPs is a route available to politicians to meet some of the social and economic objectives of the citizens. By obscuring the real costs of infrastructure projects through the use of PPPs, politicians gain the electoral benefit by delivering infrastructure effectively and on time (Hall 2015:3). The delivery of services through PPPs is part of a political agenda and government's policy priority as there are benefits that may accrue to politicians by the constructing of substantial infrastructure projects (Coghill & Woodward 2005:82). The private sector beneficiaries of PPPs publicly issue statements promoting and supporting the government and its investment initiatives. Other private sector partners may even consider making donations to the political party running the government, clearly showing the attractiveness of PPPs to politicians and the potential self-interest (Coghill & Woodward 2005:84).

The use of PPPs by government can therefore derive political benefits if infrastructure projects are delivered on time and simultaneously shift government

expenditure to the future generations (Boardman & Vining 2010:330). However, government expenditure is merely passed on to the future generations or the next government. Boardman and Vining (2010:330) characterise this as “renting the money”. Gawel (2011:4) argues that governments play an important role as the “political system is involved in the formation, design, implementation and performance of PPP solutions in a variety of ways: (i) politically, first a decision is made on the institutional framework within which public or private sector provision of goods is organised, (ii) the political system is a potential driver of PPP solutions, and (iii) the relevance of the political system leads to expectations of very specific arrangements and results from the realisation of permitted PPP solutions”.

PPPs integrate both the interests of public and private sector actors with due consideration on the socio-economic and political conditions prevailing at the time (Obosi 2018:14). For example, South Africa’s water sector has several public sector entities (the National Department of Water and Sanitation, the Department of Cooperative Governance and Traditional Affairs, National Treasury, water boards, municipalities) with their own objectives (this is discussed in detail in Section 4.3). Equally, private sector players (financiers, private engineering consulting firms, legal advisors, accountants etc) provide services to the water sector with profit maximising objectives. PPPs therefore have to cater for these varying interests to derive mutual benefits from the partnership.

The decision to use PPPs to undertake infrastructure projects is a political decision advanced by policy makers (pre-tendering phase), but the procurement of the private partner is executed by the bureaucrats (ex ante and ex post monitoring) (Schomaker 2020:812). In this context, South Africa’s local government sphere is composed of elected officials or politicians (councillors) who represent the electorate and municipal officials (bureaucrats), each playing a critical role in PPP adoption and implementation. Councillors are responsible for policy direction, law making and oversight as prescribed in Section 160 of the Constitution. The municipal council is responsible for several functions and of relevance to this study is the approval of the budget (including borrowing, entering into PPP arrangements, capital budget funding etc), approval of the service delivery plans and approvals of performance agreements. Similarly, the bureaucracy has responsibilities such as planning, policy implementation and undertaking administration functions as determined by

legislation. The municipal administration functions as stipulated in the Constitution (Section 195) include “efficient and effective use of resources” and fostering accountable government which fulfils community needs. Municipal administration or bureaucracy is responsible for technical activities which require requisite skills and tend to be better qualified compared to both political leadership and ordinary citizens (Masiya *et al.* 2019:29). Interested groups (voters or citizens) also play a role through community participation as enshrined in Section 17 of the MSA and should be afforded an opportunity to influence municipal decisions (Masiya *et al.* 2019:29) as public participation improves accountability and prevents mismanagement of service delivery expectations (Masiya *et al.* 2019:31).

#### **2.4.9 Principal Agent Theory (PAT)**

Similar to the public choice theory, principal agent theory (also known as agency theory) has its foundation in neo-institutional economics as a quantitative technique to investigate costs (Parker, Dressel, Chevers & Zeppetella 2018: 240). The theory has since transitioned to several academic disciplines such as organisation theory, sociology, finance, political science and public administration (Williamson 2010:552). The agency theory describes a relationship where the “principal enters into an agreement with an agent with the understanding that the agent will engage in appropriate actions to produce the principal’s desired outcome” (Zamir & Sulitzeanu-Kenan 2018:580; Waterman & Meier 1998:174; Eisenhardt 1985:137). In its simplest form, agency theory explains the relationship, whether governed by formal or informal contract, between the agent and the principal, setting out what the agent is expected to deliver to fulfil the principal’s desired outcomes and objectives (Zamir & Sulitzeanu-Kenan 2018:580; Waterman & Meier 1998:174; Moe 1984:756). The relationship empowers the agent to make decisions on behalf of the principal within specified boundaries, and monitoring mechanisms are in place to mitigate any potential abuse or expression of self-interest (Parker *et al.* 2018:242). One way of defining these boundaries is through well-drafted contracts which clearly outline roles, responsibilities and obligations of each party, for example in a PPP arrangement. Warsen *et al.* (2019:376) argue that well-written contracts with key performance indicators, penalties and risk allocation in PPPs are required, based on the tenets of principal agent and transaction cost theories.



Agency theory has a practical application in several disciplines, for instance in economics, shareholders of a company (principal) appoint senior management (agent) to run the business and maximise shareholder value. Senior managers, in this case, may pursue their own objectives and maximise their own rewards to the disadvantage of shareholders. Separation of ownership and control is a source of many of the agency problems (Keay 2017:1292). Other examples of agency relationships include doctor-patient, politician-citizen and employee-employer relationships. The application of PAT to public administration portrays “politicians (elected public representatives) as principals who must resolve problems within the constraint of a budget maximising bureaucratic agent” (Piano 2019:306; Moe 1984:740; Miller & Moe 1983:300). Elected officials typically would want to meet the demands of the electorate to enhance their chance of re-election. Bureaucrats, on the other hand, prefer to operate within the confines of the budget which sometimes results in conflict with politicians (Parker *et al.* 2018:242).

Agency theory may involve a three-tier relationship involving a public authority (as the principal), a public official (supervisor or manager working for the principal) and the private partner or firm (the agent) (Iossa & Martimort 2016:86). Agency theory is dynamic in nature, characterised by frequent interaction between the elected official (principal) and the agent. Information asymmetry between the two parties necessitates frequent interaction as agents tend to have “advantageous skill levels” or better technical capability to address problems compared to elected officials who usually provide policy direction (Demir & Reddick 2015:583; McCue & Prier 2008:4). Demir and Reddick (2015:583) assert that the involvement of bureaucrats extends beyond providing expert advice to politicians and spreads to policy formulation, goal setting and policy evaluation, among others.

Opportunistic and self-interest behaviour plays a key role in agency theory especially when the interaction between parties (principals and agents) is characterised by incomplete information and information asymmetries (Wagner 2019:640; Warsen *et al.* 2019:376). The various forms of asymmetries may be used strategically by each party in pursuit of self-interest and opportunistic behaviour (Parker *et al.* 2018:244).

Another dimension of information asymmetry is that principals do not easily observe the effort exerted by the agents in trying to meet the objectives set and may

therefore refuse to grant a reasonable request which may impact service delivery (Wagner 2019:640; McCue & Prier 2008:4). Elected officials as principals set the “vision” and direction whilst bureaucrats as agents focus on “how” to achieve the set objectives within the constraints applicable to their roles, for example, legislation and budgets. Keay (2017:1293) contextualises this relationship similar to the role of a board of directors in a company (principal setting the vision) and that of senior management and directors (agents focussing on how to achieve the stated goals).

Principal agent theory is associated with the following concepts: goal conflict (misalignment of incentives between principal and agent), information asymmetry (principal having inadequate information), adverse selection and moral hazard (lack of monitoring results if the agent is not performing in the best interests of the principal (Williamson 2010:552-553).

It has been argued that traditional applications of PAT in public administration are insufficient to address emerging issues given the roles performed by various public institutions (Salamon 2002:20). Elected officials are not only the principals in the traditional sense, as governments utilise indirect tools (such as third-party institutions) to address public problems (Salamon 2002:20; Waterman & Meier 1998:180). Consequently, principals in public organisations have an extended mandate of handling relations with third-party stakeholders or agents who may be private entities (Salamon 2002:22). The use of private sector players to deliver public services through PPPs is another form of an agency relationship, in that the public entity becomes the principal and the private sector acts as the agent. One way of mitigating the conflict of interest is through well-drafted contracts setting out responsibilities of each party. Warsen *et al.* (2019:376) argue that well-written contracts with key performance indicators, penalties and risk allocation in PPPs are required as the foundation of PAT and transaction cost theory. However, it is unlikely that contracts cover all material aspects and possibilities for incomplete contracts is a reality. In such a case, the reliance on “soft” or “relational” conditions becomes important as a form of collaborative governance or network governance under NPG (Warsen *et al.* 2019:377).



The specific nature of agency problems arising from PPPs differ based on the type of the contract, but in general, agent opportunism is driven by the following factors (Parker *et al.* 2018:244; Wagner 2019:637-640; Shleifer & Vishny 1997:759):

- Over investment to derive more rewards, that is, the larger the investment in the project, the higher the rewards;
- Inadequate effort by the agent (shirking on the job) if the compensation is not exclusively linked to performance;
- Entrenchment and incumbency advantage resulting in minimal effort; and
- Selfish opportunistic behaviour which may include misrepresentation of skills, qualifications and ability.

PPPs solve one principal agent dilemma which is moral hazard linked with “traditional procurement,” but equally create other forms of agency problems (Boardman *et al.* 2016:25). The common agency problems arise from poor contract design with limited measurable output, poor selection of the agent, insufficient monitoring mechanism in contracts and information asymmetry (Erie, Kogan & MacKenzie 2010:650). Information asymmetry may be reduced by increasing monitoring costs and “bonding expenditure” to be incurred by the principal to respond to information asymmetry problems (Parker *et al.* 2018:244). Wagner (2019:640) argues that the principal may remedy information asymmetry by investing in sophisticated information systems to regulate agent opportunism, or alternatively, incentivising the agent to ensure alignment of interests. Accordingly, opportunism by agents inadvertently increases transaction costs of PPPs (Wagner 2019:637).

Widmalm (2016:133) identifies the main criticisms of agency theory as (i) being founded on reductionist orientation on incentives, (ii) based on very abstract concepts, and (iii) the concept is a metaphor as opposed to a theory. Principal agent theory faces similar objections to public choice theory on the basis of its underlying assumptions such as unconstrained selfishness to maximise utility. Principal agency theory assumes extreme self-interest of the principal or agent and always assumes maximisation of their expected utility as opposed to public interest (Widmalm 2016:134; Rabin, Hildreth & Miller 2007:1102). Stewardship theory indicates that agents have the potential to pursue public interest goals and not necessarily self-

interest. Such agents are often referred to as “angel agents” (Miller & Sardais 2011:7).

In the context of this study, the principal agent relationship arises when a principal or government entity engages another agent or private entity to perform some service on their behalf (such as water provision). Government in this instance delegates its authority for decision-making to the agent or private sector partner (Erie *et al.* 2010:649). Despite the use of a private partner, PPP infrastructure projects remain a government investment. Government objectives are aligned to political power (votes maximisation) whilst the private sector wants to maximise profits and minimise risks (Williamson 2010:554).

Principal agent theory (PTA) is useful for this study to conceptualise why bureaucrats and elected officials are inclined towards financing water infrastructure using one option against other alternatives such as public private partnerships. This perspective is important considering the assumptions of rationality and self-interest from both bureaucrats and politicians.

The preceding sections described the paradigms and regimes in Public Administration and the theoretical underpinnings of PPPs. The next section explains what PPPs are, various forms and types of PPPs and benefits or drawbacks of PPPs. Literature review on the uptake of PPPs in infrastructure projects is conducted.

## **2.5 Emergence of PPPs in NPM**

### **2.5.1 Concept of PPPs**

The concept of PPPs appears straightforward, yet it has many facets, resulting in no universally accepted definition (Thiemann & Volberding 2017:8). The adoption of different PPP models across several countries contributed to the difficulty of pinpointing the precise definition of PPPs (Hodge, Greve & Biygautane 2018:1108). Despite the PPP model variations, Bovis (2015:200) describes PPPs “as a sophisticated interface between public authorities and private sector undertakings with an objective of delivering infrastructure projects, public goods and services”. PPPs integrate the private sector in service delivery beyond arms-length transactions of which “both public and private sectors have a stake in their success” (Boyer, Van Slyke & Rogers 2016:7; Lohmann & Rotzel 2014:6; Bovaird 2004:200).

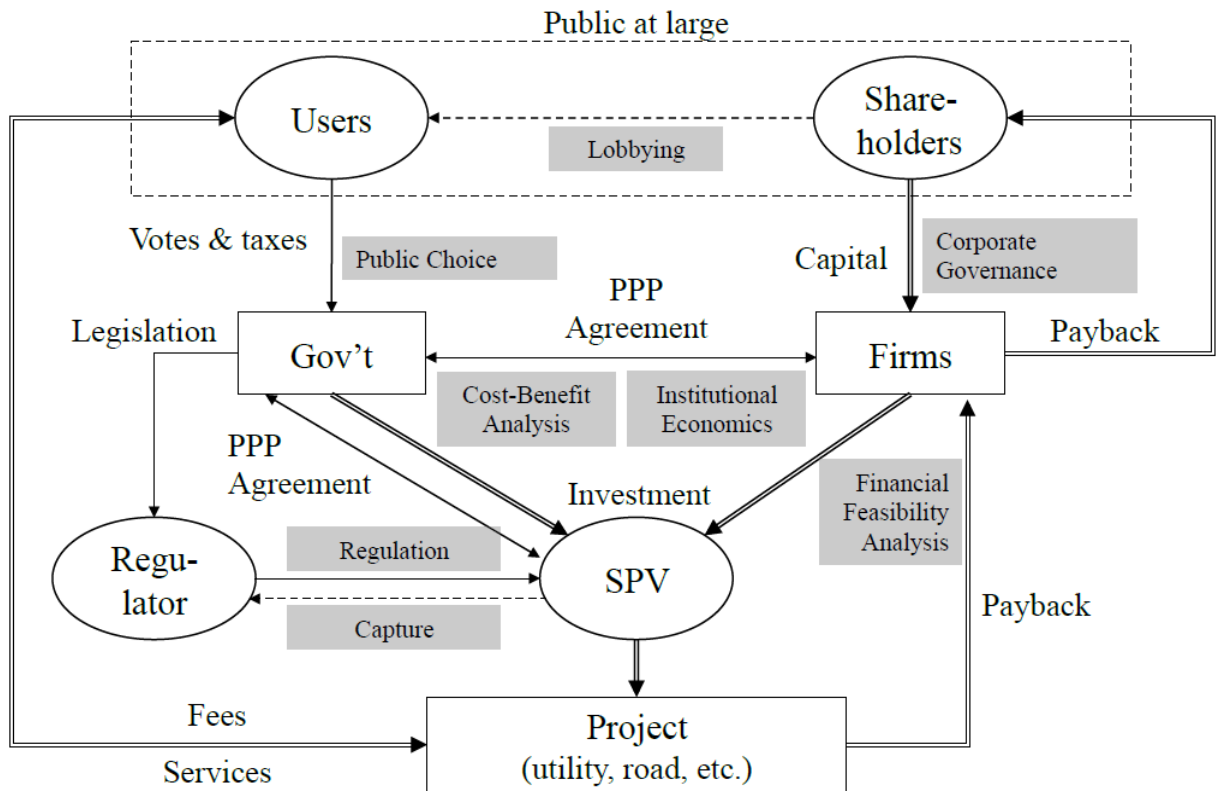
The co-operation between public and private actors is deemed to be PPPs as it supplements or replaces the traditional government role of providing public services (Schomaker 2020:808). Lonsdale (2007:312) describes PPPs as less a concept than a 'family of techniques', comprising multiplicity of government–business agreements. In most cases, the execution of new PPP projects is done through a special purpose vehicle (SPV), which acts as a separate legal entity established to implement the project. An SPV protects the joint venture partners from financial liability of their parent firms (Boardman *et al.* 2016:2). An SPV is expensive to form given the number of firms involved and various fields of expertise such as construction, engineering, finance and facility management, among others (Iossa & Saussier 2018:31).

The primary conception of PPPs is the view that collaboration brings together complementarity of resources such as skills and capabilities required to coproduce public services (Hodge, Greve & Biygautane 2018:1106; Hodge & Greve 2010:9). PPPs by their nature vary in terms of scale and scope; for instance, some focus on infrastructure and others on providing client-facing public services such as water (Waring, Currie & Bishop 2013:314). The extent of private sector involvement in PPPs varies. PPPs that involve greater cooperation between the public and private sector are construed as joint ventures and PPPs with largely an arms-length relationship may be categorised as a form of outsourcing (Waring, Currie & Bishop 2013:314).

PPPs do not only involve cooperation between public and private sectors, but encompass the sharing of risks, costs and resources; and joint development of projects and services (Hodge *et al.* 2018:1106). As a reward for taking on risk, the private partner is compensated from either direct payment from government or collecting fees through levying charges (user pay principle) to the users of the asset or a combination of the two (Schomaker 2020:812; Iossa & Saussier 2018:28; Boardman *et al.* 2016:2). PPPs have been used globally to deliver diverse public infrastructure such as water infrastructure, roads, schools, hospitals and prisons, encompassing the principles of sharing of risks and costs (Chowdhury & Chowdhury 2018:53; Boardman & Vining 2012:119).

Other terms used to describe PPPs include private sector participation (PSP), private finance initiatives (PFIs), private participation in infrastructure, privatisation, private finance projects, private sector contracting, public alliance, privately financed projects and non-profit partnership (Hodge *et al.* 2018:1106; Asian Development Bank 2008:2; Thiemann & Volberding 2017:8-9; Okwaro *et al.* 2017:34). Despite some resemblance between privatisation and PPPs, privatisation “involves the full or partial transfer of state-owned assets to the private sector” and includes the day-to-day operations by the private sector while the government acts as the regulator (Boardman *et al.* 2016:4). Chowdhury and Chowdhury (2018:53) note that PPPs form part of an alternative service delivery (ASD) mechanism where public goods delivery is undertaken by the private sector.

As discussed in **Sections 2.2 and 2.4**, PPPs may be considered as an avenue for the provision of infrastructure through a complex network of government and private sector linkages (Casady 2020:162). Warsen *et al.* (2019:375) note that PPPs succeed on the basis of networks (relational) and contractual arrangements. Services delivered through PPPs have to contend with several stakeholders from both government and the private sector. In a regulated sector, government’s role transcends to setting of tariffs/fees, setting standards and being politically accountable to citizens, among others, as shown in **Figure 2.3**. The private sector players equally have to deliver shareholder value by ensuring positive returns to capital invested (Siemiatycki 2015:166).



Note: double lines represent capital and business transfers, solid single lines represent contractual and legal relationships, and dashed lines represent informal ties and influences.

**Figure 2.3: Stakeholders involved in PPPs**

Source: Adapted from Moszoro and Krzyzanowska (2011:3).

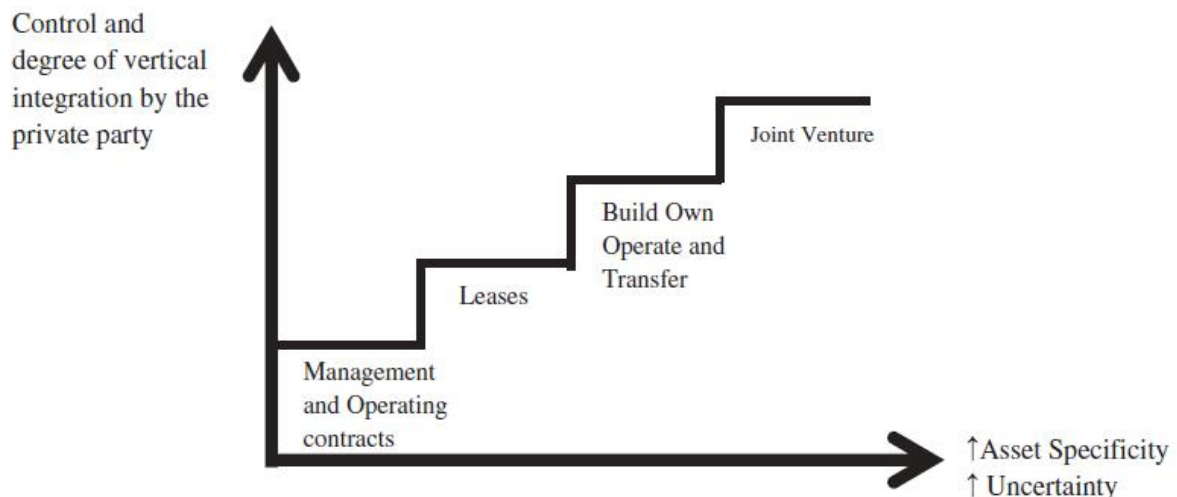
### 2.5.2 Types of PPP contracts

PPPs take several forms from financing, designing, construction and maintenance/operation of public sector infrastructure using private sector firms (Boardman & Vining 2012:119). Boardman *et al.* (2016:2) assert that a typical PPP bundles the design, construction, financing, operation and maintenance as a single project. Schomaker (2020:808) argues that cooperation models in PPPs vary in respect of design to create a balance between the managerial independence of the private partner and to foster accountability of government.

Cooperation may mean demarcation or separation of responsibilities (horizontal relations) or shared responsibilities between the parties which results in the blurring of the lines of accountability in the citizens' eyes (Schomaker 2020:809; Mörth 2009:190). Accountability takes various forms including political, legal,

administrative, professional and social, among others. In its simplistic form accountability exhibits characteristics such as transparency, liability and the imposition of penalties for poor performance (Mörth 2009:193).

PPP contract types include “service contracts, management contracts, lease contracts, build-operate-transfer (BOT) and similar arrangements, concessions and joint ventures” (Ham & Koppenjan 2002:604). The level of private sector involvement varies depending on the contract type as highlighted in **Figure 2.4**. The greater the risk allocated to the private partner, the more control ascribed to the private party. This ultimately determines the structure of the PPP arrangement with significant compensation attributed to the primary party due to risk escalation. These PPP types are briefly described below.



**Figure 2.4: PPPs responsibility matrix**

Source: Fleta-Asin *et al.* (2020:1491).

#### *Service contract*

A service contract entails “the government hiring a private company or entity to carry out one or more specific tasks or services for a period, typically 1-3 years” (Ham & Koppenjan 2002:604). Services undertaken under this contract include billing, meter reading and maintenance. Lack of transparency in contract negotiation is often cited as a major drawback in service contracts (Kumar 2012:1).

#### *Management Contract*

A management contract involves daily management and operation of the public service by the private partner (Reynaers 2014:42) and the duration of the contract is three to five years. The risk to the private party is low for a management contract given the short duration contract as reflected in **Figure 2.4**. (Fleta-Asin *et al.* 2020:1514).

#### *Lease Contract*

Under a lease contract, “the private partner is responsible for the service in its entirety and undertakes obligations relating to quality and service standards” while the government finances the infrastructure (Fleta-Asin *et al.* 2020:1514; Klijn & Koppenjan 2016:6). The risk to the private partner is relatively high compared to a management contract.

#### *Concession agreements*

In concession agreements, “the private partner (concessionaire) is responsible for the full delivery of service” which includes raising funding, construction, operating, maintenance and management of the infrastructure. Under a concession agreement, the public sector’s position shifts to monitoring of the service and in some instances is involved in tariff setting (Forrer *et al.* 2010:475). There are many variations of concession agreements which include “build-operate-transfer (BOT), build-own-operate (BOO), design-build-operate (DBO), design-build-finance-operate (DBFO), design-build-finance-maintain-operate (DBFMO) and design-build (DB)” (Reynaers 2014:11). In the United Kingdom, PPPs in the form of DBFMO are commonly referred to as Private Finance Initiatives (Boardman *et al.* 2016:2).

Concession agreements are typically over 20 to 35 years and require well-defined terms, conditions, roles and responsibilities for successful implementation (Warsen *et al.* 2019:376; Boardman *et al.* 2016:2). One of the key conditions is the management of risk between the parties as the private consortia invest upfront thereby risk is transferred from the public to the private partners (Chung & Hensher 2015:13). Stirred by the tenets of transaction cost and principal agent theories, PPPs require penalties to be imposed to breach of the conditions in the agreement for PPPs to be successful (Warsen *et al.* 2019:377).



Roehrich *et al.* (2014:112) also note that PPPs exhibit variations in practice depending on the risk appetite of both the public and private partners. Under a management agreement, public sector risk (or responsibility) is higher compared to a concession arrangement as illustrated in **Figure 2.4**.

Given the varied scope of PPPs as discussed above, this study focusses on concession agreements including their several permutations. The reference to PPP uptake by municipalities is limited to the various permutations of concession agreements for example “build-operate-transfer (BOT), build-own-operate (BOO), design-build-operate (DBO), design-build-finance-operate (DBFO), design-build-finance-maintain-operate (DBFMO) and design-build (DB)” (Ham & Koppenjan 2002:604).

In this study PPP is defined according to National Treasury (2005:6) as:

***“... a contract between a municipality and a private party in which the private party assumes substantial financial, technical and operational risk in the design, financing, building and operation of a project.”***

The water infrastructure challenges articulated in the problem statement above provide an opportunity for PPPs (in the form of concession agreements) to deliver a more lasting solution compared to other forms of PPPs. The study therefore sought to uncover the impeding factors for the use of PPPs by municipalities.

## **2.6 Value proposition of PPPs**

New Public Management (NPM) on which PPPs are anchored predicts several benefits to the public sector from the use of PPPs. NPM supports the adoption of private sector techniques and promotion of competition; contracting service provision to the private sector; monitoring of performance; defined objectives and outputs; and predetermined outcomes (Hodge *et al.* 2018:1109). PPPs are envisaged to provide superior services (both in terms of quantity and quality) based on superior knowledge, financial skills, access to capital and managerial and technical efficiency associated with the private sector (Opara & Rouse 2019:78; Klitgaard 2012a:41).

The efficient use of capital emanating from the private sector ethos drives PPP adoption as well as the mistrust of government delivering long term services to citizens (Hodge *et al.* 2018:1109). PPPs are regarded as an effective mechanism to



mitigate excessive budget escalations and contract extensions due to poor infrastructure implementation of large projects by the public sector (Warsen *et al.* 2018:1165). The public sector's attractiveness to PPPs is "on-time and on-budget" infrastructure delivery which is a symbol of political achievement and may accrue political benefits. Budget overruns are viewed as government's failure and may have negative consequences in elections, and the use of PPPs may shield such potential shortcomings (Boardman *et al.* 2016:11).

Public sector procurement is normally based on cost-plus pricing (non-fixed-price) which results in poor incentive structure between private and the public sector (Boardman *et al.* 2016:7). Cost-plus creates perverse incentives or moral hazard problems in that the higher the costs of the project, the more the private sector derives more revenue from the project (Burgess & Ratto 2003:288). To mitigate against moral hazard problems, PPPs which involve the private sector sourcing finance may create better incentives and overcome the perverse incentives (Boardman *et al.* 2016:8). Consequently, the private sector has incentive to deliver projects using minimal financial resources. In the long run, cost effectiveness has the potential to improve social welfare of the citizens served by the private sector (Boardman *et al.* 2016:8).

The exposure of the private partner to significant risk, performance-based remuneration, and management skills are cited as some of the reasons in supporting the adoption of PPPs (Opara & Rouse 2019:81; Harris 2003:20). Project risk transfer to the private sector enables infrastructure projects to be executed within set timelines and within budget, as failure to meet defined targets may lead to reduced private sector profits in the long run. PPPs in this context are seen as offering inducements to the private sector to be efficient, as most of the funding risks rest with the private partner (Chung & Hensher 2015:13). Boardman *et al.* (2016:9) argue that the private sector may avoid its fair share of risk by effectively pricing this risk into project costs, and in instances where the project fails, government takes over the project at own costs to minimise the political risks.

The performance-based remuneration is often cited as an attraction of PPPs (Iossa & Saussier 2018:28). The compensation of the private partners in a PPP arrangement may be done in three ways, (i) an agreed periodic payment from

government made through budget allocations from the fiscus (referred to as unitary payments or “availability payment”), (ii) collection of user charges or tariffs by the private partner, and (iii) “shadow tolls” or payment from government which is based on usage of the asset (“usage payment”) (Schomaker 2020:812; Boardman *et al.* 2016:2; Maryouri 2013:210). Private partners are known to use an aggressive or punitive credit control process to achieve better collection levels. This is the case because the private partner may not be subjected to significant political interference while enforcing credit control processes (Boardman *et al.* 2016:9).

Avoidance of upfront project costs by government provides another motivation for PPPs, as private partners have the ability to complete the project on time and on budget (Boardman *et al.* 2016:1). Ortega, de los Angeles Baeza and Vassallo (2016:203), based on their Spanish study, argue that avoiding capital outlay by government as the only motivation for PPPs is misplaced. However, the pursuit of efficiency only may lead to excessive investment and under-utilisation of the infrastructure asset in the future (Ortega *et al.* 2016:203). The focus on circumventing budget outlay by government results in cost benefit analysis, value for money assessments and adequate risk allocations not being conducted. The lack of efficiency consideration results in several renegotiations of the contracts to the detriment of taxpayers (Ortega *et al.* 2016:203; Opara & Rouse 2019:82).

Concession agreements such as design–build–finance–maintain-operate (DBFMO) have the potential to derive economies of scale given that the infrastructure is delivered as a bundled service with complementary expertise and skills under a single entity or special purpose vehicle (Boardman *et al.* 2016:8). Coordination from design up to operation is perceived to be seamless given that the work is done by a single consortium under a special purpose vehicle. The minimisation of coordination failures improves efficiency and societal benefits (Boardman *et al.* 2016:8).

PPPs are laden with both ideological and political connotations in that the proponents of classical liberal philosophy shun the coercive power of the state in the process of delivering public goods. This coercive power is alleged to endanger the personal freedoms of citizens and forces citizens to be overly reliant on the services provided by the public sector (Fernandez, Smith & Wenger 2006:59). PPPs in this regard provide a unique opportunity to limit the power of the state, protect rights of

citizens and promote human enterprise (Fernandez *et al.* 2006:59). Consequently, PPPs pose a threat to employment in the public sector due to the desire for a smaller government with fewer bureaucrats, whilst the private sector delivers public services (Fernandez *et al.* 2006:59).

PPPs have witnessed better delivery of some infrastructure projects compared to public sector delivery, for instance, projects in Central and Eastern Europe financed and undertaken by government produced poor and unsatisfactory infrastructure (Moszoro & Krzyzanowska 2011:1). Consequently, pressure from the citizens led administrators to explore alternative service delivery methods including PPPs. Similarly, Bender and Gibson (2010:45) reviewed the first 10 years of the concession in Mbombela Local Municipality (South Africa) and concluded that the PPP improved the management of the water ecosystem, and that water access and quality improved, and expenditure on government grants for infrastructure projects improved. However, tariffs increased as a cost recovery mechanism. The efficiency consideration drives the use and adoption of PPPs by some governments.

Given their sophistication as an alternative infrastructure investment mechanism, PPPs are described as having “iconic status around the world” (Hodge & Greve 2010:8).

## **2.7 Problems with PPPs**

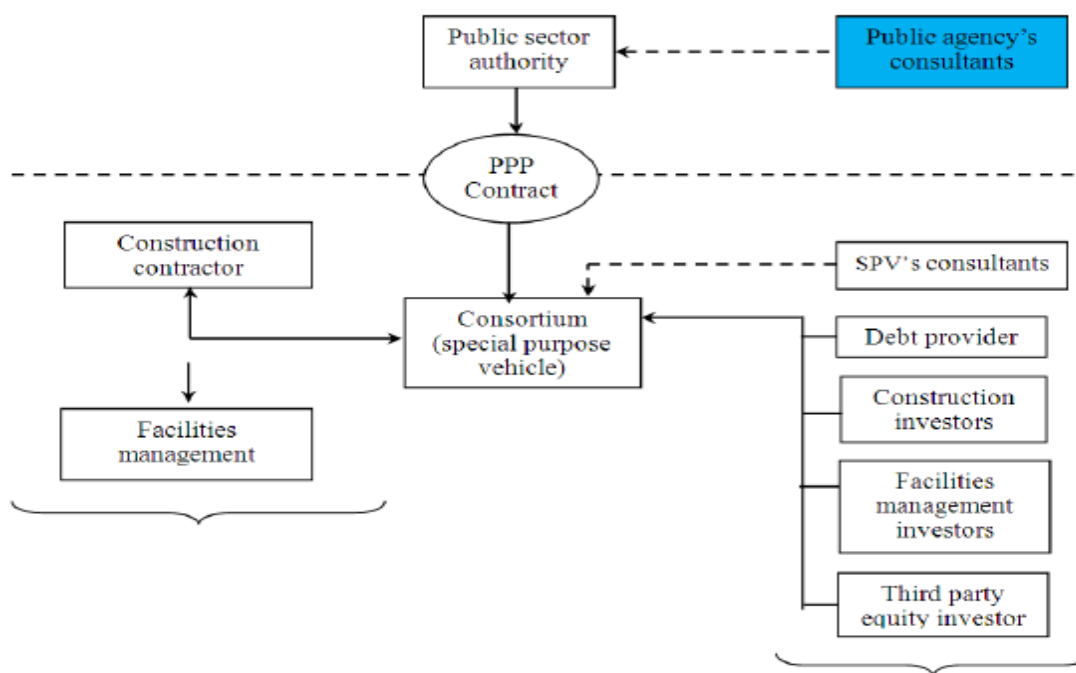
Despite the promises of efficiency associated with PPPs as envisaged by NPM, the implementation of PPPs faces a myriad of problems. PPPs are complex, take time to conclude, the value for money is questioned and they are subjected to political interference, among others. These challenges are elucidated in full below.

### **2.7.1 Complexity of PPP**

The complexity of PPPs arises from multiple factors such as the procurement process, contracting, the negotiation process and project implementation, among others (Boyer & Newcomer 2015:130). The complexity arises due to marked differences between traditional contracting and PPP procurement. PPPs require, among others, value for money analysis, contribution by government to the partnership and the distribution of risks between the private and public sector (Boyer & Newcomer 2015:130). Traditional public procurement contracts generally do not involve bundled services and are therefore simpler compared to PPP projects which

consist of design, finance, building and operation contracted to a consortium of private sector companies (Iossa & Saussier 2018:28).

Bundling services induce complexity in contracting as the consortium of firms may include firms in the following fields: construction, facility management, finance, legal and engineering, among others (Iossa & Saussier 2018:28). Bundling of services involves integrating various partners or even institutions to manage a single PPP project which can be a megaproject. This integration is essential to bring various skills to the project and enable coherent service delivery, but it also brings its own complexity due to the vertical interdependences of the partners who provide complimentary services to the infrastructure sector (Sturup 2019:461). **Figure 2.5** shows the interdependencies among various consortium partners which adds to the complexity of the PPP arrangements.



**Figure 2.5: An illustration of the PPP structure involving many players**

Source: Adapted from Umar, Idrus, Zawawi and Khamidi (2012:304).

The high level differences between traditional and PPP contracting are condensed in **Table 2.5** to illustrate the complexity of PPPs.

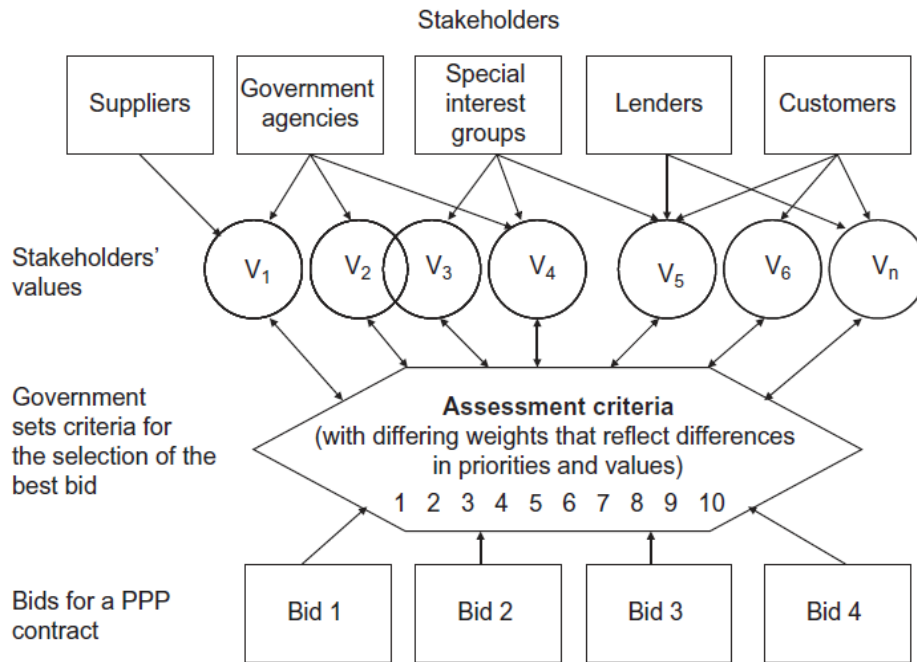
**Table 2.5: Traditional contracting vs PPP contracting.**

Traditional contracting	Collaborative contracting in partnerships
<ul style="list-style-type: none"> <li>• Specify the good or service desired from a contractor</li> <li>• Facilitate bidding process and maintain distance with potential bidders</li> <li>• Select contractor by the lowest cost or best value</li> <li>• Government monitors contract</li> <li>• Risk is held primarily by government</li> <li>• Contracts are short-term</li> </ul>	<ul style="list-style-type: none"> <li>• Specify the output or outcome required, leaving the process open</li> <li>• Facilitate bidding process with multiple vendors (potential partners)</li> <li>• Select a partner based on the expected 'value for money'</li> <li>• Government monitors and contributes to the partnership</li> <li>• Private and public actors bear risk</li> <li>• The product is asset-specific</li> </ul>

Source: Adapted from Forrer, Kee and Boyer (2014:65).

PPPs by nature involve several actors whose actions are guided and motivated by self-interest. Self-interest motive with multiple actors creates a conducive environment for conflict to arise. PPPs are complex and challenging given the multiple actors involved (Chowdhury & Chowdhury 2018:54; Mouraviev & Kakabadse 2015:775; Klijn 2009:31). The complexity of PPPs is brought about not only by the involvement of many parties, but by each actor pursuing own interest and having own conception of the problem and how it will be addressed (Opara & Rouse 2019:82; Klijn 2009:31).

In addition to pursuit of self-interest by various parties to the PPP arrangement, the different set of values for each of these stakeholders adds to complexity as postulated by the stakeholder theory (Mouraviev & Kakabadse 2015:775). PPPs represent a set of relationships involving many private partners under a common special purpose vehicle with the public sector. PPP arrangements can therefore be considered as a cooperative effort for the purpose of deriving benefits to the various stakeholders, but this does not negate their differences in values (Mouraviev & Kakabadse 2015:774). **Figure 2.6** highlights the linkage between stakeholder values and the way in which bids are selected. Values are different per each stakeholder with some possibility of overlap and the non-uniformity of these values adds to the complexity of PPPs. Mouraviev and Kakabadse (2015:773) argue that by developing the bid criteria, government is expressing its own set of values which the bidders have to express as an interest.



**Figure 2.6: PPP stakeholders and differing values**

Source: Adapted from Mouraviev & Kakabadse (2015:775).

Experiences of PPP projects vary in many aspects such as size, scope, sector and by country and this variation suggests that there is no single model or 'one-size-fits-all' best practice (Iossa & Saussier 2018:35; Waring *et al.* 2013:314). While broad lessons may be available from PPP experience elsewhere, each project is unique and therefore requires considerable effort to execute adding to the complexity of PPP in general (Waring *et al.* 2013:315).

### **2.7.2 Lengthy contracting period**

The procurement process for larger PPP projects tends to be longer and complex (Iossa & Saussier 2018:28) and this complexity consequently attracts a small pool of private sector players to participate in the PPPs (Chowdhury & Chowdhury 2018:55). Economic theory suggests that where there is a small pool of competitors, there is a greater likelihood of collusion among these firms (Iossa & Martimort 2016:88), for instance, there are only four bids for most PPP projects in the United Kingdom (Chowdhury & Chowdhury 2018:55).

Large PPP projects take time to commission and therefore various risks such as demand shocks are associated with these projects. The efficient risk allocation within

the PPP becomes a complex undertaking given the long periods of contract negotiation and implementation (Chowdhury & Chowdhury 2018:56). The commissioning of PPP projects varies from inception, tendering and implementation. Of the 160 PPP projects in Canada, the tendering process took an average of 18.2 months. Ireland averages 34 months, the UK averages 34.8 months (Casady *et al.* 2019:1262), France averages 30.3 months, Australia averages 19 months and Germany averages 27.3 months (Palcic, Reeves, Flannery & Geddes 2019:13). South Africa on the other hand averages 39 months (Ngamlana 2009:58). The time taken signifies the complexity associated with large infrastructure projects and this increases transaction costs at the different stages of the project life cycle (Palcic *et al.* 2019:4). The different tendering periods experienced by the various countries provide an opportunity for the development of best practices through learning from various experiences (Palcic *et al.* 2019:13).

The drawn out PPP contracting is not only a problem in itself, but it impacts the likely participation of the private sector to bid for such projects. If the private sector is discouraged from competing for contracts due to a prolonged contracting or tendering process, the principal motivation for PPPs to achieve economic efficiency is undermined (Reeves, Palcic, Flannery & Geddes 2017:1072).

### **2.7.3 Value for money**

PPPs are considered to be an effective avenue for government to deliver services without incurring significant upfront capital outlay in financing infrastructure projects. However, there is limited data on the actual performance of PPPs to support the belief of value for money due to lack of ex-post reviews of PPPs after implementation (Boardman *et al.* 2016:16-17). The notion that PPPs result in minimising government expenditure and saving taxpayers money may be an illusion, as taxation is simply postponed or transferred to the future generations (Klitgaard 2012a:41). Capital outlay by the private partner will be repaid through future taxation. While the recognition of the PPPs garners support and experiences growth, questions about their effectiveness in deriving value for money are increasing with very limited or mixed evidence of their success (Boardman *et al.* 2016:17; McQuaid & Scherrer 2010:30). PPPs are time consuming from pre-launch to implementation and this disincentivises government from undertaking meaningful and detailed post-implementation evaluation of PPPs (Opara & Rouse 2019:83). Boardman and Vining



(2012:128) argue that some PPPs incur higher costs than envisaged with the Highways Agency (United Kingdom) paying a 25 per cent premium on four PPP road projects.

Value for money from PPPs is sometimes questioned on the basis that the private sector has superior expertise in PPPs compared to government (Garvin 2010:403). Most government departments have limited exposure to PPPs and consequently the knowledge imbalance perpetuates information asymmetry between government and the private sector. This knowledge imbalance is often exploited by the private sector to derive more returns from PPPs at the expense of the government and citizens (Boyer & Newcomer 2015:131; Gavin 2010:403). The private sector has the ability to bring in international partners with extensive experience from PPPs across the world, further disadvantaging government during the negotiation phase (Boyer & Newcomer 2015:131).

Hall (2015:7) takes a dim view of PPPs and describes them as a mechanism involving “bending fiscal rules for private profit”. PPPs obscure the true extent of public borrowing, while simultaneously providing guaranteed, substantial and sustained returns to the private sector (Hall 2015:3). PPPs allow capital expenditure by the public sector to circumvent the national debt benchmarks yet create an impression of careful fiscal management by masking the extent of financial exposure (Hellowell 2010:307).

The concern about value for money from PPPs has not caused public alarm due to the public’s lack of understanding of the intricacies of PPPs (Opara & Rouse 2019:80; Coghill & Woodward 2005:90). The lack of understanding of PPPs by the general public reaffirms their complexity and counts against the citizens being in a position to evaluate whether PPPs are being commissioned for public benefit or for selfish objectives of the politicians and bureaucrats. In addition, the terms of contract between the government and the private partner are confidential, further creating information asymmetry with the citizens (Opara & Rouse 2019:80; Coghill & Woodward 2005:91).

#### **2.7.4 Governance and accountability**

PPPs significantly alter the social and political functioning of the way in which governments operate and their interaction with citizens (Opara & Rouse 2019:80).

Governance refers to the rules that parties agree to (rules of the game), that is, who is responsible for execution and takes responsibility for certain activities in a PPP arrangement (Skelcher 2010:292). Other aspects related to governance include how decisions are made, for example, consultation with all parties to foster transparency (Skelcher 2010:292). Skelcher (2010:293) outlines four facets of governance, namely legal governance (conformity to the law), regulatory governance (system of rules), democratic governance (accountability) and corporate governance (procedures of decision-making).

The use of a private partner to deliver services on behalf of government alters democratic arrangements in the eyes of the public (Opara & Rouse 2019:80; Coghill & Woodward 2005:89). This is so because citizens may be of the view that they have to engage with private partners to meet their service needs as opposed to interacting with their elected officials (Opara & Rouse 2019:80). PPPs change the relationship from public to private sector provision of services and equally from serving citizens (public sector) to customers (private sector) (Opara & Rouse 2019:80; Coghill & Woodward 2005:89). The democratic rights and privileges of citizens under public sector provision of services are diminished to conform to the dictates of the market forces associated with the private sector (Coghill & Woodward 2005:89).

Citizens may consider the use of PPPs as a service delivery mechanism inducing some governance uncertainty and blurring of accountability lines between government and the private partner. Government can blame its private partner for failure to deliver services and vice versa as citizens may not be privy to the contractual details of the PPP arrangement (Opara & Rouse 2019:80). The use of PPPs and channelling public funds through private funds reduces transparency and accountability in government processes (Hall 2015:27). Accountability is holding the agent or principal responsible for performance in accordance with the contract. In a mature democracy, the government's accountability is delivered through the electoral process. Government's track record is put to the test and scrutinised during voting; however the use of PPPs may weaken accountability by blaming the private sector for failure to deliver services (Opara & Rouse 2019:80; Coghill & Woodward 2005:89).

Bishop and Waring (2016:469) argue that PPPs should create a healthy balance between granting the private partner some degree of authority and the need to monitor the activities of the private partner. This balancing act requires a review of the old-style governance structure to ensure the protection of the public interest and also reduce potential exploitation or opportunistic behaviour of the private partner (Skelcher 2010:301). The framework for the balancing of risk and reward is a key governance challenge that has to be addressed and specific skills are required to maintain this balance (Bishop & Waring 2016:470). Klitgaard (2012b:5) observes that PPPs provide insufficient protection for “public values and public interests” given the “total control” of the operations by the private partner replacing the old and traditional governance structure of government.

Despite all of the concerns of lack of government accountability in PPPs, Morth (2009:193) argues that it is still possible to achieve democratic legitimacy in PPPs based on the contractual agreement between the parties.

#### **2.7.5 Impact on government workers**

Public sector employees are concerned if the service delivery mechanism changes from exclusively government to the private sector or a combination of the two models and alters the underlying culture and ideology of the two organisations (Bishop & Waring 2016:472). Labour unions representing private sector employees are generally supportive of PPPs due to the expansion of employment opportunities for its members and the opposite is true for public sector unions (Siemiatycki 2015:173). Examples of resistance from public sector unions occurred in Canada when the unions opposed privatisation and PPPs in the infrastructure sector on the basis that this undermines the principles and philosophy of the public sector (Siemiatycki 2015:173).

Boardman *et al.* (2016:20) observe that PPPs materially minimise the negotiating power of public sector unions given the likely increase of employees from the private sector. The reduction in bargaining power may compromise salary negotiations leading to stagnant remuneration or reduction of real wages over time. An example is the Kelowna General Hospital in British Columbia, where a PPP arrangement was used to construct a new section of the hospital. The private partners responsible for

cleaning of the hospital reduced the number of public sector workers and their earnings (Boardman *et al.* 2016:20).

The implementation of PPPs bring about some changes in the culture and industrial relations in the public sector entity due to the infusion of private sector employees into public service (Madimutsa & Pretorius 2018:318; Boyer & Newcomer 2015:132). Beck, Toms, Mannion, Brown, and Greener (2010:135) define culture as the “lens through which an organisation can be interpreted both by its members and by interested external parties through an appreciation of an organisation’s symbolic codes of behaviour, rituals, myths, stories, beliefs, shared ideology and unspoken assumptions.” Bishop and Waring (2016:472) assert that the culture differences consequently result in PPPs being an inevitable conduit of dispute between the government and its private partner. PPPs therefore bring forth the challenge of reconciling, coping and managing these perceived cultural differences. The inherent differences can be resolved by both partners investing in time, effort and trust to bridge the gap and attain mutual objectives from the long term partnership (Bishop & Waring 2016:463; Klijn & Teisman 2005:97).

The conflict arises from a number of sources. Madimutsa and Pretorius (2018:318) attribute the changes in industrial relations to the dual chains of command created by PPPs, one involving a private sector company monitoring its own workers and secondly, public sector managers playing an oversight role on private sector employees. The management of public and private sector employees within a close inter-organisational network is a complex undertaking, especially in tasks that are jointly performed (Bishop & Waring 2016:473). Cultural differences take various forms which include (Bishop & Waring 2016:473):

- Conflict in beliefs;
- Values (the reason of existence);
- Motives (profit maximisation versus public interest);
- Competitive behaviour as opposed to serving the public;
- Enterprise and entrepreneurship; and
- Accountability to shareholders (private capital as opposed to government).

PPP projects introduce some complexity in the manner in which the service is delivered due to the potential fragmentation in accountability between the two partners (Forrer, Kee, Newcomer & Boyer 2010:479). The fragmentation in accountability can be resolved by strengthening collaboration and developing trust over time (Forrer *et al.* 2010:481).

PPPs bring about an additional dimension with regard to industrial relations. PPP arrangements may result in public sector employees being completely or partially replaced or transferred to the private sector. In such an instance, affected public sector workers' terms and conditions of employment are protected and private sector managers are unable to make changes to align with their workers (Bishop & Waring 2016:474). The implication is different employment conditions for different employees performing the same type of job (two-tiered system). The close interaction of the two sets of workers may provide a breeding ground for friction, especially in instances where the employment conditions between the private and public sector differ significantly (Bishop & Waring 2016:475). Depending on the extent of the differences in employment benefits, it is plausible for employees to move to the better paying party (assuming the opportunities arise), for example, if the private sector pays more than the public sector, it would be easier to recruit the senior public officials to the private sector and weaken the monitoring capacity of the public sector in the process (Herrera & Post 2014:629).

### **2.7.6 Transaction costs associated with PPPs**

The complexity of most PPPs does not arise at the implementation phase only, but even at the contracting stage. As advanced by the transaction cost theorists, PPPs induce additional costs due to complexity, a prolonged tendering phase, complex financing structures and limited government contracting skills (Reeves *et al.* 2017:1073; Dudkin & Väilä 2006:309). The capacity of the government to successfully conclude PPP contracts involves significant costs as government may have to rely on external advisors due to scarce skills in the public sector (Boyer & Newcomer 2015:132). The lack of skills (such as engineering, legal and project finance) in the public sector increases costs of PPPs as bureaucrats may have to rely on private sector experts to deal with complex negotiations and finalise commercial agreements. The private sector may take an opportunity to derive higher rents due to the limited skills in the public sector (Saussier, Staropoli & Yvrande-

Billon 2009:13). An example of the inferior strategic planning skills by the public sector is the emergence of under-utilised infrastructure (white elephants) due to over-engineering or initial under-costing which tremendously escalates during project implementation (scope creep) (Hall 2015:33; Saussier *et al.* 2009:13). Given the pursuit of self-interest by private parties, effective contract management is vital in PPPs to ensure that the public interest objectives of the project are realised and protected for the duration of the project (Hall 2015:33).

PPPs are complex arrangements and are therefore comparatively expensive for the entire duration of the project (Reeves *et al.* 2017:1072). The full extent of the costs involved in a PPP project is not always fully accounted for given that some activities are done by bureaucrats who are salaried employees (Hall 2015:27). The PPP units form part of the government bureaucracy and provide transaction advisory services and post-implementation monitoring, and these costs are usually not reported as part of the total transaction costs. Irrespective of the exclusion of other costs, PPP transactions are deemed to be exorbitant and may range between one to three per cent of the total costs associated with the project (Boardman *et al.* 2016:21).

As part of developing a business case for a project to be financed through a PPP, various assumptions are put forward which include demand estimations and long-term operational costs (Boyer & Newcomer 2015:132). These estimates are then used during contracting to determine the fees payable to the private partner and any significant errors in estimation compromise the financial sustainability of the project leading to government carrying the additional costs (Boyer & Newcomer 2015:132).

Another common feature of most PPPs is the underestimation of costs by the private sector during the bidding and contracting phase and the exaggeration of the anticipated benefits from the service (Hall 2015:33). For instance, an infrastructure project in the water sector is more likely to get approval if the water service provider forecasts high coverage to underserved communities without necessarily modelling the extent of the service coverage. The result of over-exaggerated benefits increases the costs of the project, as government might be expected to cover the revenue shortfalls depending on the type and payment method in the PPP agreement. Road traffic forecasts for toll road PPPs in Australia and Central and Eastern Europe achieved less traffic and less revenue than forecasted (Hall 2015:33).



Transaction costs vary from three to five per cent of the total contract value for countries with well established PPP frameworks and this can increase to between 10 to 12 per cent in new or pioneering projects (Saussier *et al.* 2009:10; Dudkin & Vällilä 2006:311). The implication of the high transaction cost is that it may discourage government to undertake projects through PPPs, especially if the likely benefit from PPPs versus traditional procurement is uncertain (Reeves *et al.* 2017:1080).

### **2.7.7 Political influence and corruption**

PPPs are perceived to be an effective option in the procurement of infrastructure compared to traditional procurement mechanisms (Mustafa 2015:55). The attraction of PPP projects to private sector investors is dependent on country-specific conditions which include among others, the governance structure of public entities, accountability of government entities, management of “soft risks” such as “corruption risk, political instability risk, weak property rights and ineffective institutions risk” (Mustafa 2015:55-57).

Corruption risk arises based on the extent of the discretionary powers (or full exercise of assigned power of private benefit) entrusted to government officials in deciding important aspects on PPP procurement (Schomaker 2020:811; Cobarzan & Hamlin 2005:32). Corruption risk is therefore directly related to the extent of discretionary power and without a robust legal framework with sufficient safeguards in relation to conflict of interest, corruption escalates (Cobarzan & Hamlin 2005:32).

PPPs involve public procurement and in instances where supply chain management procedures are not followed, corruption, graft, cronyism and collusion manifest in the procurement process (Chowdhury & Chowdhury 2018:54; Pusok 2016:681; Hall 2015:27; Farlam 2005:33). Concession agreements span over 20 years and the guarantee of the private sector to receive income streams over this period creates huge incentives for corruption in two ways. Firstly, there is incentive for the project to be conducted through PPPs (guaranteed returns over a long period) as opposed to the once off delivery of the project via the public sector, and secondly, the opportunity to have a “once in a life-time” contract through PPP is very appealing (Hall 2015:31).

Corruption risk or more generally unethical behaviour in PPPs arise from two fronts, firstly, by influencing politicians to implement infrastructure projects through PPPs



and secondly, by influencing bureaucrats to award the PPP project to a specific private consortium (Schomaker 2020:812). Influencing the financing of a project via a PPP arrangement faces high risks given the uncertainty of the “briber” to be awarded the contract when tendering takes place at a later stage (Schomaker 2020:814). The stakes are high for the private sector partner who would therefore seek to also influence the bureaucrats to award the contract thus making PPPs a potential avenue to fuel corruption. Corruption at the tendering stage is not only peculiar to PPP procurement but also common in traditional procurement methods, and corruption may even take place in PPPs without the politicians being influenced to deliver infrastructure through PPPs (Hall 2015:33; Schomaker 2020:814). Similarly, the same process of influencing politicians and bureaucrats may unfold in relation to extension of the contract, contract re-negotiation or contract renewal (e Neto, Cruz, & Sarmiento 2019:555). Electoral cycles also result in politicians requesting either increasing the scope of the project to garner more votes or opportunistically re-negotiating an existing contract for personal gain, a practice known as strategic misrepresentation (e Neto *et al.* 2019:555). The repercussions of the unethical behaviour are summarised in **Table 2.6**.

**Table 2.6: PPP features and potential unethical behaviour**

	pre-level	ex ante	ex post
<b>Subject</b>	Political level	Administration	Administration
<b>Taks/Decision</b>	PPP or other forms of provision (public only, outsourcing etc.)	<ul style="list-style-type: none"> <li>• PPP-Model</li> <li>• Contract details</li> <li>• Private partner</li> </ul>	<ul style="list-style-type: none"> <li>• Renegotiations?</li> <li>• Application of penalty clauses?</li> <li>• Change of contract contents</li> </ul>
<b>Channel for unethical behavior</b>	<ul style="list-style-type: none"> <li>• Discretion</li> <li>• Lack of transparency</li> </ul>	<ul style="list-style-type: none"> <li>• Discretion</li> <li>• Lack of transparency</li> <li>• Information asymmetry</li> <li>• Transaction costs</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of transparency</li> <li>• Contract incompleteness</li> <li>• Information asymmetry</li> <li>• Transaction costs</li> <li>• Hold-up situation</li> </ul>
<b>Possible consequences</b>	<ul style="list-style-type: none"> <li>• Market distortion</li> <li>• Inefficient resource allocation</li> <li>• Space for inefficiencies in later stages of the PPP-project</li> </ul>	<ul style="list-style-type: none"> <li>• Dysfunctional competition for the market</li> <li>• Suboptimal choice of PPP-type</li> <li>• Choice of inefficient partner/s-best solution</li> </ul>	<ul style="list-style-type: none"> <li>• Overpricing of users or the public sector</li> <li>• Additional transaction costs for the public sector</li> <li>• Loss of service quality/-underperformance</li> </ul>

Source: Adapted from Schomaker (2020:813).

Chowdhury and Chowdhury (2018:54) argue that corruption and collusion are likely because PPPs have scope of “pork-barrel politics based on ideology, social or political ties, or simply incentive to pander”. Collusion among private firms is more likely if PPP projects are complex and attracting only a few responses from the market. For instance, in the UK, there are on average only four bidders per project creating room for collusive tendering (Chowdhury & Chowdhury 2018:54).

The selection of an incompetent private sector partner due to corruption may compromise service delivery to citizens, harm the economy and crowd-out potential investors (Scribner 2011:2). In instances where the private sector is expected to pay bribes to government officials to secure the contract, corruption increases business costs and reduces the returns of the private sector. Corruption in government procurement is detrimental in attracting both domestic and foreign capital for PPP projects in the future (Pusok 2016:681). Corruption delegitimises efforts to attract private investment and the long term impact is subdued due to innovative solutions associated with private capital (Scribner 2011:2).

The incentives of the public and private sector differ as postulated by the agency theory (Zamir & Sulitzeanu-Kenan 2018:580). Sectors with natural monopolies such as water provision rely on government to play a regulatory function to mitigate excessive tariffs that may be charged by the private sector. The existence of corruption within the regulatory system compromises government’s role and makes it less effective in two ways. Firstly, government may also approve high tariffs to the benefit of the private sector and the excess profits shared with corrupt public officials (Hall 2015:31). Secondly, government may approve low tariffs in the pursuit of votes. Consequently, private investments in the water sector will be curtailed given the weak regulatory function caused by corruption (Pusok 2016:681).

Pusok (2016:687) investigated the impact of corruption on PPPs in selected countries and concluded that corruption impedes the appetite of private foreign investment, crowds-out private sector investment and negatively affects the overall effectiveness and efficiency of PPPs. Countries with dilapidated infrastructure and in desperate need for PPPs often face “dictatorship, crony capitalism, crony NGOs, cultures of bribery, high incidence corruption and ineffective legal systems” which

collectively disincentivise private sector investment (Hammami, Ruhashyankiko & Yehoue 2006:18).

In reference to PPPs, politics and corruption in the United States of America, Nobel prize winning economist Paul Krugman makes the following observation (Krugman 2012):

*“As more and more government functions get privatised or have private sector participation, states become pay-to-play paradises, in which both political contributions and contracts for friends and relatives become a quid pro quo for getting government business. Are the corporations capturing the politicians, or the politicians capturing the corporations? Does it matter? .... a corrupt nexus of privatisation and patronage that is undermining government across much of our nation.”*

### **2.7.8 Pricing of services through PPPs**

Decentralisation of services and private sector delivery allows for strict credit control for non-payment of services and institutes cost-recovery of services (Arroyo-Rincon 2016:40). Credit and debt collection policies must be instituted in instances of failure to pay for services by residents in line with municipality policies (Oosthuizen & Thornhill 2017:436). Strict credit control and cost recovery pricing invokes intervention from politicians due to citizens' complaints, especially for essential services such as water (Pusok 2016:679). While the private sector may bring about efficient services, higher prices and strict credit control sparks a political storm which may lead to the government putting pressure on the private partner (Farlam 2005:36). This intervention may reduce the attractiveness of PPPs. Hall (2015:31) notes that PPPs in the water sector in France led to higher water prices by around 16.6 per cent.

This section articulated challenges faced by PPPs' experience during pre-implementation, implementation and post-implementation phases. PPPs are complex, value for money is not easy to determine, transaction costs tend to be exorbitant, general resistance from the public sector unions occurs and they face complex governance and accountability structures. These challenges are common in most PPPs in different sectors of the economy.

The next section deals with the experiences of PPPs in respect to the water sector. Water is essential for life and PPPs in this sector have both economic and social dimensions that are critical to understand, given that the study focusses on water PPPs.

## **2.8 Experiences in water PPPs**

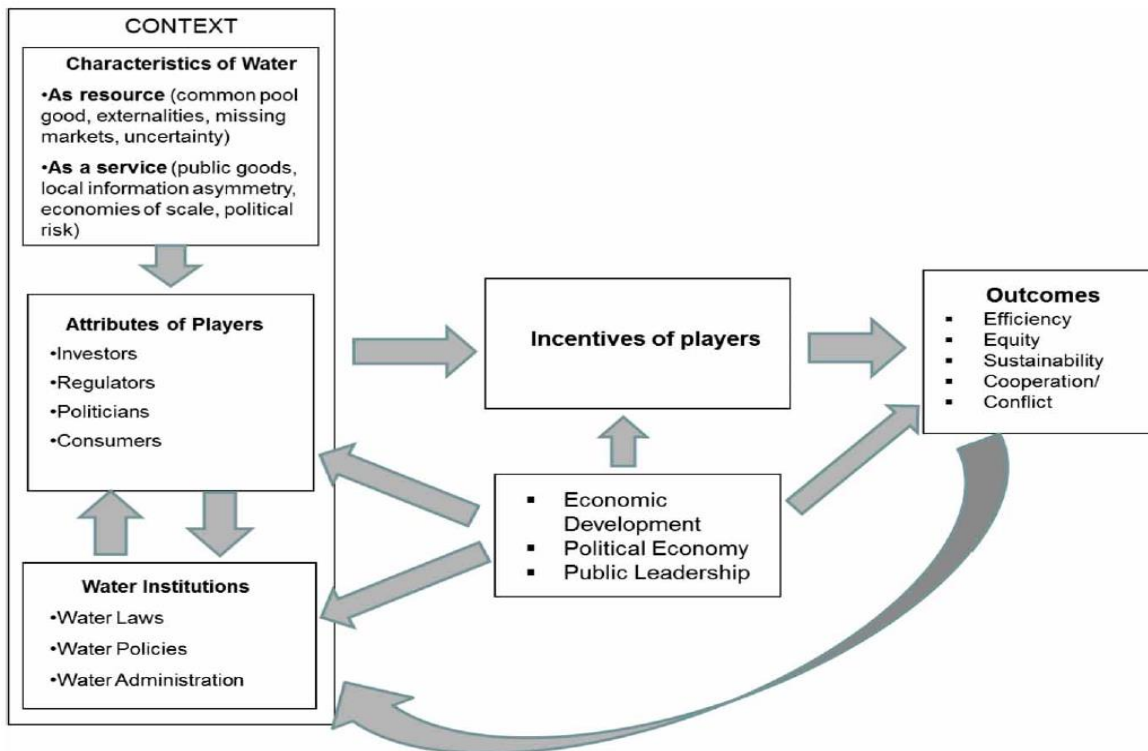
The public sector has historically been at the forefront of financing water infrastructure investments and in light of constrained public finances, concessional donor finance and borrowing, PPPs are now playing an important role, especially in developing countries (OECD 2018:7). PPPs in the water sector face peculiar challenges given the specific characteristics of water (both from a resource and service perspective) (Araral & Wu 2016:3). Several features of the water sector may influence the investment decision-making process. The specific features of water include the following:

- Water has no substitutes and is essential for life. In addition, water is traditionally provided by a single provider within a specified geographical area (natural monopoly). There is little room for competition to take place in the water sector compared to other network utilities (Bayliss 2016:4; Kumar 2012:2; Prasad 2007:10; Martin & Sohail 2005:44);
- Water is considered as a public good, in that it benefits the community at large. In addition, water is also a merit good, meaning that it should be accessible, even to citizens who have no capacity to pay. Water is also used to achieve government's social objectives in the delivery system (Bayliss 2016:4; Prasad 2007:11);
- Water infrastructure and water delivery are essential to promote economic development and governments would want to intervene to ensure alignment to public priorities and respond to economic and social conditions (OECD 2018:4);
- The water sector is highly capital-intensive (large sunk costs) which increases the risk faced by the private sector. The high risk may translate into high premium charged by the private sector on water infrastructure projects. Risks faced include financial, political, regulatory, design, demand, planning, commercial and construction (Iossa & Saussier 2018:37; OECD 2018:4-5).

Water is largely moved through underground networks of pipes and pumps which is costly to maintain (Bayliss 2016:4).

- Water is a flow resource with the potential of generating negative externalities (for example polluting the drinking water sources of downstream users) if government does not intervene (Kumar 2012:3; Prasad, 2007:12). The active regulatory function of government in this regard may make the water sector unattractive for private sector players. Equally, the private sector may require government to abide by existing water laws and create certainty (Kumar 2012:3).

The characteristics of the water sector and its market structure are of paramount importance in designing appropriate PPP interventions. Contract negotiations in the water sector tend to be complex, as evidenced by the high incidence of contract re-negotiations during the lifetime of a concession agreement (Iossa & Saussier, 2018:38). Guasch (2004:13) argues that almost three quarters of PPP contracts in the water sector were re-negotiated in developing countries. **Figure 2.7** summarises features of the water sector, role players and their respective incentives:



**Figure 2.7: Characteristics of water and key role players**

Source: Adapted from Araral & Wu (2016:3).

The characteristics of the water sector above pose the sector to be vulnerable to political intervention, given the social objectives associated with water provision. Provision of water services for profit by the private sector seems imprudent in instances where there is a lack of protection for the poor people (Demuijnck & Ngnodjom 2011:254; Martin & Sohail 2005:44).

PPPs gradually erode the democratic participation between the government and citizens in water delivery leading to suspicion of collusion between government and the private partner (Kumar 2012:2). The suspicion of collusion is detrimental to citizens' trust in government and may be detrimental to citizen welfare (Kumar 2012:2).

## **2.9 Conclusion**

The following issues were reviewed in this chapter: the concept of public administration, public administration paradigms and applicable theories that champion PPPs. From the paradigms discussed, PPPs are anchored in NPM and NPG. PPPs capture both the policy-making and the implementation/service delivery processes (associated with NPM) and therefore may be considered under both NPM and NPG paradigms. PPPs act as a tool of NPG for the delivery of infrastructure services through a network of arrangements between the public and private sector.

The theories informing the research are public choice theory and principal agent theory (PAT). Public choice theory (PCT) is the main theoretical framework that influenced the NPM reforms which promotes outsourcing and privatisation of public services. PCT postulates that humans are rational decision makers and act in their best interest. The use of PPPs by government can therefore garner immediate political credit by delivering projects instantly to attract votes, while shifting some of the expenditure to the succeeding government and political leaders. PCT challenges the notion that elected officials and bureaucrats make decisions in the best interest of the citizens or in the public interest.

Similar to the public choice theory, PAT is anchored on the assumptions of rationality and self-interest and agency problems arise from the separation of ownership and control. Principal agent theory is useful for this study to conceptualise why bureaucrats and elected officials are inclined towards financing water infrastructure

using one option against other alternatives such as PPPs. In the context of this study, the principal agent relationship arises when a principal or government entity engages another agent or private entity to perform some service on their behalf (such as water provision).

This chapter also considered some of the features of the water sector that may influence private sector participation. Water has no substitutes, is essential for life and is a public good and therefore subject to political influence.

The next chapter explores international experience of PPPs to uncover best practice from countries that have implemented a significant number of water PPP infrastructure projects successfully. The objective is to assess how regulatory frameworks in the selected countries are designed to ensure comparison to South Africa's PPP framework.



### **3. CHAPTER THREE: INTERNATIONAL EXPERIENCE OF PPP FRAMEWORKS**

#### **3.1 Introduction**

Chapter 2 discussed the theoretical foundations of public-private partnerships (PPPs) within Public Administration in a developing South Africa. This chapter explores international experience of PPPs to uncover best practice from countries that have implemented a significant number of water PPP infrastructure projects successfully. The objective is to assess how regulatory frameworks in the selected countries are designed to ensure comparison to South Africa's PPP framework.

The chapter begins by discussing the concept of benchmarking to inform the selection of countries to be used in the study. Documentary review is used in this chapter to select four countries which have implemented a number of PPPs in the water sector. To achieve some measure of comparability, three countries selected have similar developmental characteristics to South Africa and one country selected is a developed country with an established practice and a long history in PPPs. To this end, the study analyses the PPP framework in both the developed and developing worlds where PPPs responsible for water supply were adopted, and also reports on identified lessons learnt.

After the selection of the countries, the comparative framework (in Section 3.2) will be used to compare the PPP frameworks across the selected countries. The framework is determined from literature on success factors for adoption and implementation of PPPs. The aim of undertaking benchmarking is to understand the particular contexts for PPP frameworks in different countries and provide insights into why the frameworks achieve more PPP projects, what works, how it works, and then to derive possible lessons for South Africa.

#### **3.2 Benchmarking theory**

This section lays the theoretical foundation for undertaking benchmarking for PPP frameworks for the selected countries, namely China, Brazil, Mexico and the UK. In other words, this section guides how benchmarking should be conducted from a theoretical perspective and informs the selection of the countries.

The origin of benchmarking is anchored in the private sector as a managerial concept which started in Japan in the 1970s. Japan's Xerox Corporation used the

concept to study competitor brands and then make improvements to gain market share (Papaioannou 2007:497). It took two decades for the concept to start filtering into the public sector and its emergence coincided with the NPM reforms, with other authors identifying benchmarking as an outgrowth of NPM (Braadbaart & Yusnandarshah 2008:423).

Government use of PPPs in its quest to promote efficiency, cost effectiveness and economy as postulated under NPM, has gradually embraced the concept of benchmarking which is predominantly a private sector concept. Benchmarking is defined as a process improvement established from learning from other organisations or environments (Hong, Hong, Roh & Park 2012:444). Alternatively, “benchmarking can be understood as the systematic identification of processes and performance outcomes by an outstanding entity in comparison to its peers” (Hong *et al.* 2012:444). The underlying principle of benchmarking is identifying products, services, or processes with high standards and then adjusting own processes to reach the observed high standards elsewhere. The observed standards elsewhere are commonly referred to as best practice (Milosevic, Djuric, Filipovic & Ristic 2013:365).

In addition to products or services, benchmarking is useful in identifying new ideas and new ways to improve processes and procedures or policies. Hong *et al.* (2012:444) identify diverse aspects that could be used as the basis for benchmarking: strategy-based benchmarking, small- and medium enterprises benchmarking, benchmarking for technical efficiency, benchmarking for service provision, and benchmarking for industry level and national competitiveness.

De Castro and Frazzon (2017:750) identify five generations of benchmarking practices observed over time and include: “reverse engineering, competitive benchmarking, process benchmarking, strategic benchmarking and global benchmarking.” It is apparent that the benchmarking concept can be used in several settings including national policy benchmarking such as PPP frameworks across countries once the specific variables have been determined. The process of undertaking policy benchmarking is common in government and acts as a tool of policy-making and policy monitoring (Hachez, Marx, Lein, Meuwissen, Schmitt, Jaraczewski & Morondo 2017:10; Papaioannou 2007:499).

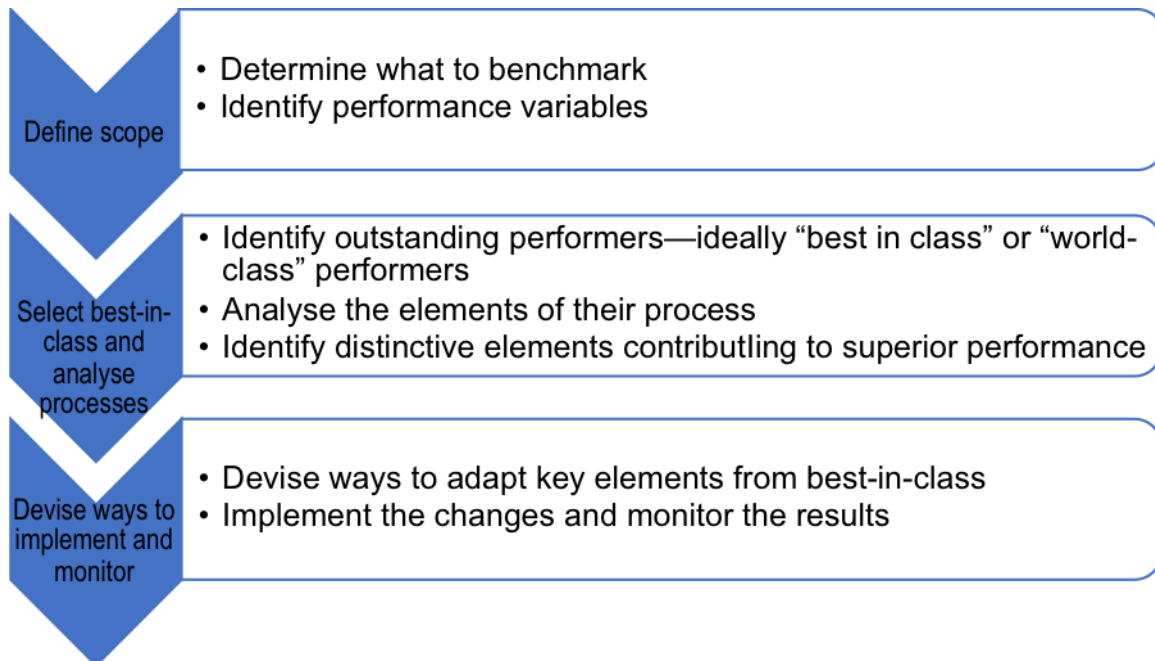
Benchmarking as a management or policy instrument is premised on the assumption that organisations or institutions have capacity to learn from one another and therefore good practices may be adapted to improve operations in another organisation or entity. Ammons and Roenigk (2014:310) identify two ways in which learning occurs, firstly, contact with other organisations which introduces new ideas or indirectly when new employees join the organisation and bring new perspectives (mimetic learning). Secondly, learning can be through the sharing of ideas based on the experience of exemplary or successful organisations (normative learning).

Benchmarking in the private and public sectors has some dimensional differences. In the private sector, benchmarking is a performance improvement measure, while in the public sector benchmarking is used as a tool of governance. Despite these delineations, it is argued that a public sector may pursue performance improvement after attainment of sound governance (Milosevic *et al.* 2013:368). Benchmarking in the public sector may be categorised as follows (Ammons & Roenigk 2014:311-314):

- Comparison of performance statistics with predetermined standards or with statistics of other producers (often referred to as metrics benchmarking or results benchmarking);
- Visioning initiatives – reliance is placed on very broad social indicators and less emphasis on measurable service delivery targets, for example, a project may be conceived to achieve “Sustainable Tshwane” and no sub-indicators provided; and,
- Best practice benchmarking – the method relies on identifying top performers and then understanding their processes with the hope of adopting or adapting the methods of top performers to own institution. This process leads to the emergence of best practice benchmarking or process benchmarking.

Based on the discussion above, for the purpose of this study, normative learning and best practice benchmarking will be used in this chapter. Normative learning is the sharing of ideas based on the experience of exemplary or successful organisations, while best practise benchmarking uses the experience of top performers to inform own processes. Given the convergence of the terms, best practise benchmarking is used going forward. Best practice benchmarking is founded on two assumptions, firstly, top performers have superior practices, and secondly, the superior practices

are easily distinguishable and imitated to improve own results (Hachez *et al.* 2017:11). Best practice benchmarking follows the generic steps depicted in **Figure 3.1**.



**Figure 3.1: Benchmarking process**

Source: Author’s formulation based on Ammons and Roenigk (2014:315); Milosevic *et al.* (2013:366).

Papaioannou (2007:500) argues that benchmarking of public policy should consider the context prevailing at the time, for example, socio-economic conditions and societal values. The contextual factors also apply when benchmarking countries or regions. The development of best practice is always debatable given the different contexts associated with public policy, however this can be remedied by considering a few factors. Countries or organisations or regions facing similar conditions should ideally be benchmarked together, as the transfer of ideas is easier given similar contexts. However, similar contexts should not be mistakenly regarded as the only criteria for interorganisational or country learning for purposes of benchmarking. There is value in learning from both similar and dissimilar contexts. Benchmarking used to search for best practice requires variation across cities, regions or countries, even those with dissimilar conditions (Ammons & Roenigk 2014:326).

Within the field of Public Administration, benchmarking as a concept has attributes of comparative public administration as discussed below.

### **3.2.1 Benchmarking and Comparative Public Administration**

There are inherent conceptual similarities between benchmarking theory and Comparative Public Administration (CPA). Jreisat (2010:612) defines CPA as “a method of learning and discovery that utilises comparative analysis to advance administrative knowledge.” Comparative analysis may be undertaken in various aspects of public administration such as administrative structures, administration reforms, administrative tools and strategies, public policy, public functions, organisational dynamics, management practices, national development initiatives and cultural standards, among others, with the objective of advancing public administration knowledge and service delivery (Khan 2016:2; Fitzpatrick, Goggin, Heikkila, Klingner, Machado & Martell 2011:821; Jreisat 2010:613-614).

There are several influences on the administrative systems in a country which include globalisation, technology, digitisation and colonialism, especially in African countries. Globalisation results in the adaptation of practices from around the world and benchmarking of best practice with regard to administrative strategies, policies and processes to ensure better policy implementation for government to meet citizens’ needs (Fitzpatrick *et al.* 2011:821; Jreisat 2010:613-614). Technology and digitisation similarly influence public administration practices in several ways, for example, the use of e-government portals may lead to the restructuring and reconfiguration of bureaucracy (Jreisat 2010:617; Jreisat 2004:1012).

Comparative analysis seeks to recognise both similarities and differences in the public administration practices within organisations in the same country or even across countries (Khan 2016:2; Fitzpatrick *et al.* 2011:824; Eglene & Dawes 2006:598). Comparative public administration should therefore identify and compare the different practices and problems encountered by governments in the process of delivering services while considering varying cultural contexts (Khan 2016:2). The ultimate focus is to enhance governance, efficiency and effectiveness in the provision of government services (Khan 2016:2; Fitzpatrick *et al.* 2011:823; Eglene & Dawes 2006:598).

The discussion on benchmarking and CPA above informs the selection of countries in this chapter. To conform to the guidance in literature, countries with both similar and dissimilar conditions to South Africa will be considered as discussed in the next section.

### **3.2.2 Selection of countries**

To guide the selection of countries for benchmarking, South Africa's key developmental indicators are briefly discussed. South Africa is an upper middle-income developing country in Southern Africa and among the emerging economies of the world. The Gini index is between 0 and 1 where "0 represents perfect equality, while an index of 1 implies perfect inequality". In 2015, South Africa's Gini coefficient was 0.63 still signifying an extremely unequal society (Sulla & Zikhali 2018:43). The African Development Bank (ADB) estimates South Africa's post-tax Gini coefficient at 0.7, structural unemployment around 36 per cent and poverty levels of 50 per cent of the population (ADB 2017:59).

Based on the benchmarking theory discussed above, the countries selected for the international review of PPP frameworks should therefore exhibit similar developmental characteristics or contexts with South Africa for a credible and robust comparative analysis. Some of these factors considered include a stage of economic development (developing country/emerging economy), and comparable socio-economic conditions such as levels of unemployment and inequality. An important dimension considered in the selection of the countries was continental representation to capture different perspectives and enrich the analysis. The starting point in the selection of the countries was utilising the Private Participation in Infrastructure (PPI) Database of the World Bank for the year 2019. The PPI Database "records information of PPP infrastructure projects for low and middle-income countries globally and is compiled using publicly available information such as major news sources, databases and government websites, among others" (World Bank Group 2020:1). The PPP data is accessible by sector (for example, water), by country and over time. To capture developments over time, the period 1995 to 2019 was selected and the number of water infrastructure projects reflected in **Table 3.1**.

It is important to note that the PPP projects considered here only relate to service provision to residents or citizens and do not include bulk water infrastructure

projects. For example, there were 543 water related PPP projects in China across all levels of government with 517 of the projects (representing 95 per cent of projects) undertaken at local/municipal level. In Brazil, municipal water PPP projects represent 57 per cent of all water PPPs and none of the PPPs in Morocco, Algeria, Jordan, Egypt, Ghana and Gabon are at municipal level. South Africa, Turkey and Kenya have all (100 per cent) water PPPs occurring at municipal level.

**Table 3.1** The total number of water infrastructure PPP projects at all levels of government is reflected in the column “total number of PPP projects” and the total municipal water PPP projects (including the % of total) are in the column “municipal PPP projects”. It is important to note that the PPP projects considered here only relate to service provision to residents or citizens and do not include bulk water infrastructure projects. For example, there were 543 water related PPP projects in China across all levels of government with 517 of the projects (representing 95 per cent of projects) undertaken at local/municipal level. In Brazil, municipal water PPP projects represent 57 per cent of all water PPPs and none of the PPPs in Morocco, Algeria, Jordan, Egypt, Ghana and Gabon are at municipal level. South Africa, Turkey and Kenya have all (100 per cent) water PPPs occurring at municipal level.

**Table 3.1: Number of water PPP projects by developing countries (1995-2019)**

Continent	Country	Total number of water PPP projects	Number and % municipal PPPs
Asia	China	543	517 (95%)
	Indonesia	28	24 (86%)
	India	20	12 (60%)
	Malaysia	13	4 (31%)
South America	Brazil	168	96 (57%)
	Colombia	57	27 (47%)
	Argentina	22	2 (9%)
	Peru	10	3 (30%)
North and Central America	Mexico	47	13 (28%)
	Ecuador	5	2 (40%)
	Cuba	1	n/a
	Guatemala	1	1 (100%)
Middle East and North Africa	Algeria	15	0 (0%)
	Jordan	5	0 (0%)
	Morocco	2	0 (0%)
	Egypt	2	0 (0%)
	South Africa	6	6 (100%)
	Mozambique	3	0 (0%)



Continent	Country	Total number of water PPP projects	Number and % municipal PPPs
Sub-Saharan Africa	Ghana	2	0 (0%)
	Gabon	2	0 (0%)
	Kenya	1	1 (100%)
Eastern Europe	Russia	27	24 (89%)
	Romania	9	8 (89%)
	Ukraine	3	2 (67%)
	Turkey	2	2 (100%)

Source: Author's calculations from World Bank Private Participation in Infrastructure Database (World Bank Group 2019: Online).

It is important to note that the PPP projects considered here only relate to service provision to residents or citizens and do not include bulk water infrastructure projects. For example, there were 543 water related PPP projects in China across all levels of government with 517 of the projects (representing 95 per cent of projects) undertaken at local/municipal level. In Brazil, municipal water PPP projects represent 57 per cent of all water PPPs and none of the PPPs in Morocco, Algeria, Jordan, Egypt, Ghana and Gabon are at municipal level. South Africa, Turkey and Kenya have all (100 per cent) water PPPs occurring at municipal level.

**Table 3.1** shows developing countries with a high number of water PPPs. As discussed above, best practice benchmarking is founded on the assumption that top performers have superior practices, and therefore countries with a high number of PPPs in the water sector may have superior practices and a conducive environment to attract private sector participation in PPP projects. While there are several reasons that drive private sector investment, a clearly defined PPP framework supported by a conducive environment (rule of law, depth of capital markets among others) plays a crucial role in promoting PPPs (Biygautane, Hodge & Gerber 2018:332).

For the purposes of this study, **China, Brazil and Mexico** were selected based on the number of PPP projects in the water sector, as well as to achieve a good spread of representation. These countries represent Asian, South American and North American continents which provide for rich and robust comparative analysis. The socio-economic conditions of Mexico, Brazil and China exhibit many similarities with South Africa as discussed in the subsequent sections.

Given that there is value in learning from both similar and dissimilar contexts, the **United Kingdom of Great Britain and Northern Ireland (UK), specifically England and Wales**, was chosen to represent developed countries with established PPP culture. The UK is a developed country with a dissimilar context to South Africa and this may provide valuable learnings. Since the early 19th Century, the UK, particularly, England and Wales, pioneered the provision of water through the private sector (Bayliss 2016:5; Prasad 2007:20). The UK is considered as a mature and healthy market for PPPs, as it was among the first countries to adopt PPPs (Wang *et al.* 2020:1). The popularity of PPPs was experienced in both developed and developing countries after their initial implementation in the UK (Dong, Wang & Yang 2016:215). Since the early 1990s, PPPs in the UK experienced a growth trajectory as they were perceived as an effective alternative mechanism to deliver goods and services by government (HM Treasury 2012:15). PPPs in the UK form part of a “Private Finance Initiative (PFI)” introduced by former Prime Minister John Major’s government in 1992 (Willems & Van Dooren 2016:210). A Private Finance Initiative (PFI) is defined as PPP projects where the private sector raises the required capital to construct the asset. In other words, a PFI is a form of PPP (National Audit Office (NAO) 2018:3).

Before a detailed analysis of the selected countries, the next section sets out the framework to guide the assessment of the countries’ PPP frameworks. In other words, the succeeding section seeks to answer the following questions: what factors or parameters were used to undertake comparative analysis of the PPP frameworks? What factors would one look at before concluding that a PPP framework is conducive for private sector investment or not? These questions are aligned to “what to benchmark” and “identify performance variables”. The next section is meant to provide broad guidelines and not necessarily a full exposition of the critical success factors for PPPs.

### **3.3 Framework to support private sector participation**

The challenges facing the water sector in most countries can be categorised broadly in the following five factors (Hall 2015:26; Hall 2001:8):

- Infrastructure: increasing water leakages in the water supply and reticulation networks, failure to replace old and dilapidated pipes, and the slow adoption

of new technology to manage the water supply, pumping and water quality control systems.

- Financial: framework that fails to achieve sustainable and equitable tariffs among different water users, limited to non-existent enhancements to revenue collection resulting in a low payment culture and inadequate financial resources to continually invest in infrastructure.
- Environment and health: water quality not meeting public health standards, disregard for conservation and environmental management in delivering water services to communities.
- Socio-political: political considerations leading to under-recovery of costs, and lack of transparency and accountability within the water governance institutional arrangements.
- Managerial: inefficient management leading to loss in productivity, capacity building for technical staff and efficient procurement of services lacking.

Despite the controversy of involving the private sector in providing public services, PPPs is one option available to tackle some of the challenges identified above (Prasad 2007:6). However, PPPs flourish where there is an enabling environment or conditions conducive to attract private sector investment.

This section sets out the broad factors that influence private sector participation in PPPs. Why would countries with the same socio-economic conditions attract different levels of private sector investment in government infrastructure projects and what are the distinguishing factors? These are the questions that this section seeks to address more broadly.

Biygautane *et al.* (2018:332) identify the fundamental success factors guiding private sector participation in PPPs. These factors include “(i) good governance and rule of law, (ii) legal and regulatory institutions, (iii) competition-driven market economies and (iv) professional capacity in both the private and public sectors”. Each of these factors are described in detail below.

### **3.3.1 Good governance and rule of law**

Bovis (2015:200) describes PPPs “as a sophisticated interface between public authorities and private sector undertakings with an objective of delivering

infrastructure projects, public goods and services. The interface or relationship between the parties is regulated through a contract or agreement. In its simplistic form, PPPs represent commercial arrangements between public and private sectors which are subject to commercial law and more broadly the general rule of law (Boyer *et al.* 2016:7; Lohmann & Rotzel 2014:6). Given the complexity of some of the PPP arrangements involving a myriad of stakeholders, especially in contracts involving consortiums, parties to the agreement should trust the legal system to resolve disputes if they arise. The legal system in a country should be independent and adjudicate matters in a fair manner and not be partial towards any party to the agreement. Contract law provisions should equally apply to government, similar to the private sector, to ensure that each party to a contract fulfils its rights and obligations.

PPPs take various forms and the degree of complexity increases, especially under a concession agreement which has a project life span of over 20 years. The long duration of concession agreements requires the private sector partner (concessionaire) to deliver services upfront such as raising funds, construction, operating, maintenance and management of the infrastructure (Reynaers 2014:11). Private sector investors (both local and international) therefore require legal certainty or legal recourse should a breach of contractual terms occur given the huge financial commitments made upfront. The impartiality of the justice system, free from political and big business interference, empowers investors to seek remedial action in courts should a contractual dispute arise which occurs frequently in long-term construction projects (Biygautane *et al.* 2018:332).

The adherence to good governance principles and respect of the law transcend across the life cycle of a PPP project from conception, procurement, implementation and monitoring. The key concern in most PPPs is on the procurement stage (World Bank Group 2015b:28). PPP procurement should be done transparently within the established procurement framework with transparency mechanisms embedded in the process. The procurement framework should have safeguards to anti-corruption and be in conformity to competition laws which shun collusive behaviour by competing firms (World Bank Group 2015b:28). Parties objecting to the procurement

process should have access to information considered during adjudication in pursuit of any potential legal recourse.

### **3.3.2 Legal and regulatory institutions**

Regulatory procedures and the institutions tasked with implementing and enforcing such regulations should be well defined to promote effective participation by all stakeholders, especially the private sector. There is no uniformity in the manner in which countries set up their legal and regulatory frameworks for PPPs; some rely on existing procurement laws and others enact specific PPP laws and regulations (World Bank Group 2015a:11). Despite the form taken by the regulatory framework, at a minimum, it must recognise PPPs as a viable funding alternative for public infrastructure, establish the necessary procedures, and define rights and obligations for all the parties in a PPP arrangement. To ensure a binding effect and legal enforceability, enacted PPP laws may be preferable. In instances where PPP laws are not in place, PPP-related policies also show governments' commitment and should be supported by other common-law provisions in case of contractual disputes (World Bank Group 2015a:11).

The existence of a strong, well-defined and sound legal and regulatory framework promotes the success of PPP projects as applicable boundaries are set before commencement of any process. Some of the parameters include governments' position on foreign private investors in PPPs, project level factors such as pricing/tariff determination, role of oversight bodies in PPP projects, and legal recourse mechanisms, among others (World Bank Group 2015b:28; Biygautane *et al.* 2018:332).

In terms of legal recourse, an independent judiciary is important for investors should disputes arise in the ordinary course of conducting business. An independent judiciary is evident when politicians, other state institutions and big business do not intervene in the adjudication of matters before courts. In an independent judiciary system, judges apply the law without prejudice and based on own independent interpretations with no outside influence. The overarching basis for an independent judiciary is that costs of contracting are minimised as governments' actions are subject to judicial review. This introduces predictability in the process which is vital in providing a stable contractual environment. The private sector requires guaranteed

protection of property rights to safeguard its investments (Tridimas 2014:3; Zajc 1996:19).

Political commitment and continued government support play an important role to entrench and empower regulatory institutions created to promote private sector investment. The regulatory environment and the institutions created to enforce regulations should be transparent, accountable and should monitor the conduct of all role-players, including bureaucrats (Biygautane *et al.* 2018:333). The PPP policy environment should be transparent and predictable, with minimal legislative and regulatory gaps. A predictable policy environment improves efficiency in PPP procurement, implementation and monitoring which are important for the success of PPP contracts (Mutambatsere 2018:71).

PPPs frequently attract negative public sentiment due to a perceived increase in prices or tariffs (World Bank Group 2015b:27). As such, commitment by government in establishing strong independent economic regulators in cases where the public good or service is delivered by a monopoly provider is necessary to counteract the public sentiment of price or tariff increases. Similarly, where the independent economic regulator is established, the methodology for tariff determination and the factors considered should be clearly outlined in advance and form part of government policy through regulations or statute.

### **3.3.3 Competition driven market economies**

As discussed in Chapter 2 of the thesis, one of the key tenets of New Public Management (NPM) includes decentralised bureaucracy and promotion of competition by having a transparent tendering system free from corruption and patronage networks. For PPPs to work, conditions that allow effective competition to take place during the tendering process are crucial. Competition is introduced during the tendering process and appraisal criterion should be prescribed at the onset to facilitate fair evaluation of the proposals and implementation once the project has been awarded. In general, PPP projects are assessed against these main areas, namely socio-economic impact, economic viability, value for money, fiscal responsibility and commercial viability (World Bank Group 2015a:15).

Promoting competition is a key issue in the provision of water services and without sufficient private sector players competing to deliver public service, PPPs may not

deliver value for money. Water provision in many instances is characterised by single or monopoly providers in an area, and therefore some form of price regulation may be necessary to remedy potential abuse of this monopoly position. A combination of competition at one stage (bidding) and regulation (after award of the project) may be ideal to safeguard the interests of the public, sometimes known as public interest considerations (Hall 2015:33; Zekri & Easter 2007:581). Private partners' objective is to derive positive financial returns while delivering the contracted service and this profit maximising behaviour must be subjected to sufficient competition. Failure to introduce competition at the bidding stage results in the creation of non-competitive or closed markets which are tantamount to having an inefficient public sector monopoly provider. PPPs should neither negatively interfere with open market philosophy nor be used to avoid transparency in the bidding markets (HM Treasury 2015:13). Tendering and selection measures for private sector partners should conform to fair competition principles and the bidding criteria and adjudication thereof should be open for public scrutiny (Beh 2010:77; European Commission 2003:8).

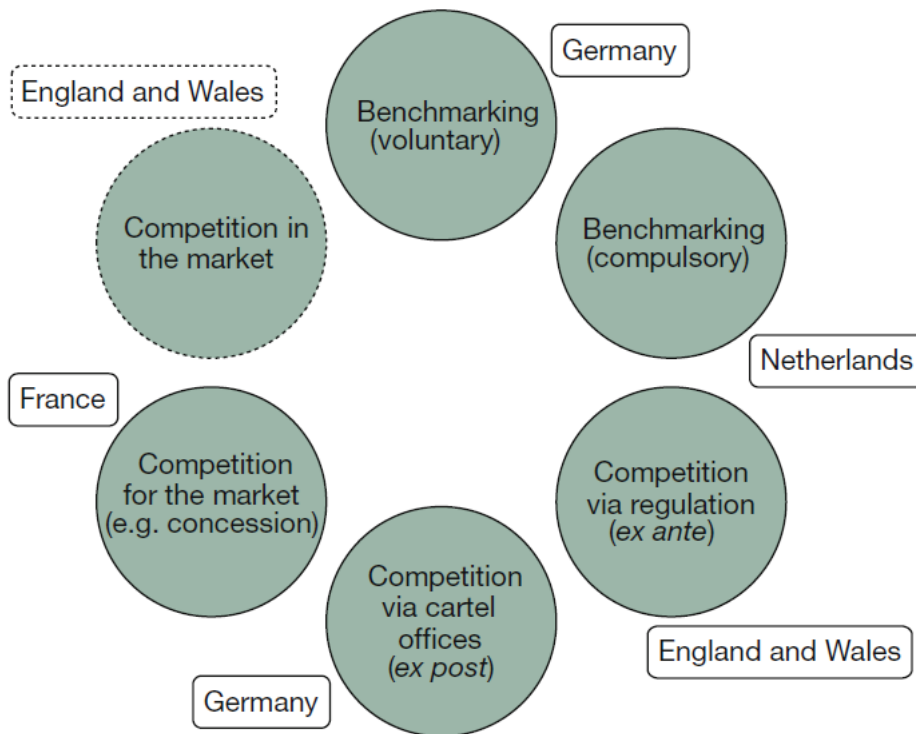
Introducing PPPs without competition will not derive value for money and benefits of reduced costs and efficiency in the delivery of the services will not be realised (HM Treasury 2015:13). Competition in PPPs occurs at the tendering phase where private sector investors compete and competition is guided by how both PPP laws and procurement laws are structured. Progressive PPP procurement laws or regulations promote competition from overseas bidders who may bring additional sources of expertise, technology and finance. Competition brings about dynamism and efficiency whilst concurrently deriving profits for the private partner (Beh 2010:77). Under conditions of effective competition, the transfer and sharing of risk between the contracting parties is improved for mutual benefit (Biygautane *et al.* 2018:333).

The open market concept advocated by the European Commission extends to allowing foreign investors to participate in the PPP tendering process. In other words, restrictions on participation by foreign based companies may be harmful to the competition process because some overseas bidders have a long history of executing projects of similar nature, technical expertise and cheaper sources of finance based on their previous track record (Beh 2010:77).



The promotion of competition has an overriding goal of protecting and enhancing public interest (Obradović, Lončar & Stojanović 2018:168). Competition is therefore not an end to itself, but an enabler for the achievement of the greater good which is public interest (Obradović *et al.* 2018:170). The tendering process is seen as competition for the market and produces a single winner or provider (winner takes all principle) and regulatory measures are required to minimise exploitation arising from having a monopoly provider of services. There are different approaches of dealing with natural monopolies in the water sector. A few European countries have established a track record in regulating natural monopolies in the water sector using approaches such as competition in the market, competition for the market and use of benchmarking techniques (Oelmann & Czichy 2013:146). Benchmarking or yardstick techniques involve comparing a water utility's performance against defined indicators of similar utilities (Berg 2016:5). Benchmarking can be made compulsory (Netherlands) or voluntary (Germany) (Oelmann & Czichy 2013:146). Ex-post regulation involves tariff analysis (after the event) from thorough investigation by authorities to determine whether abuse did not take place. Competition in the market involves regulating supply networks and yet opening the retail market for persistent competition. In contrast, ex ante regulation attempts to mimic competition by approving tariffs of water utilities. Under an ex-ante approach, an economic regulator determines an appropriate tariff as is the case in England and Wales (Oelmann & Czichy 2013:146).

**Figure 3.2** provides a summary of the regulatory approaches in selected European countries to mitigate against potential natural monopoly abuse.



**Figure 3.2: Approaches to deal with natural monopolies in the water sector**

Source: Adapted from Oelmann & Czichy (2013:146).

An example of an ex ante approach would be the creation of an independent economic regulator or sector regulator or independent consumer groups and associations acting as oversight bodies (Oelmann & Czichy 2013:146; Berg 2016:5; European Commission 2003:9). Independent economic regulation or independent regulatory agencies (IRAs) bring about coherence, predictability, credibility, legitimacy and accountability (Berg 2016:5; Ehrhardt, Groom, Halpern & O'Connor 2007:9). Independent regulation fosters coherence in respect of tariff setting and maintaining water service standards. Predictability relates to certainty in the regulatory framework in terms of tariff setting mechanisms, and the outcomes of an independent regulator should have legitimacy and accountability (Berg 2016:5; Ehrhardt *et al.* 2007:9). Independent regulatory agencies (IRAs) are largely shielded from political interference and exercise a reasonable degree of autonomy to government ministers (Tsai 2014:455). The OECD suggests a few variables to assess whether a regulator is independent (OECD 2016:22):

- Budget independence or non-reliance of financial resources from a member of the executive or Ministry;

- Appointment of the head of regulator, either by Parliament or legislature;
- The dismissal of the head of the regulatory agency should have some conditions to be ratified by Parliament;
- The regulator should be accountable to the legislature or Ministry or members of the regulated sector/industry;
- Authority to autonomously determine tariffs; and
- Sanctioned to vary or confirm contractual terms between entities subject to regulation and other market players.

Regulation of PPP contracts that create natural monopolies is important in tackling any potential conflict between the parties; creating a platform for consumers to raise any objections or complaints; advocating for public interest; and ensuring adherence to the long-term agreements to benefit the parties fairly (Marques 2017:4).

#### **3.3.4 Professional capacity in both the private and public sectors**

The PPP project life cycle involves several successive steps and at each level different specialist skills are required. These specialist skills are required from project initiation/inception, and include undertaking feasibility studies, financing skills, financial negotiation, drafting terms of reference for private sector contractors, preparation of procurement documents and settling concession agreements, among others (Mutambatsere 2018:73).

The inception phase of a PPP involves project initiation and defining the specific service required by a PPP, and where there is internal capacity, sector specialists in the public sector play this role (Biygautane *et al.* 2018:333). For example, if the project is in the water sector, water engineers in the public entity are responsible for project initiation. At feasibility study phase, the private sector may be involved to provide an objective and independent assessment, but in some instances public sector officials undertake this role depending on capacity level. At procurement stage, specialists in supply chain management play an active role to guide the process, but technical skills are important to adjudicate complex technical proposals. In addition, financial skills are important to evaluate financing proposals. At the project implementation and monitoring stages both technical and project management skills are critical. The array of activities in the PPP project life cycle

require various skills sets and this makes PPPs complex compared to other project financing alternatives.

Deepening the skills capacity within government such as establishing specialised PPP units improves efficiency, management and enforcement of PPP projects. Public sector officials with the requisite knowledge are vital to ensure that societal public interests are safeguarded during the structuring, implementation and monitoring of a PPP agreement. Expertise to monitor contract implementation and compliance is required to ensure that performance targets are being met to protect public interest. Equally, the private sector's technical capacity is essential to deal with complex financials that are aligned to the desired service (Biygautane *et al.* 2018:333).

One mechanism identified to promote public sector skills is the establishment of PPP units within government. PPP units are specialised public agencies responsible for the development and promotion of PPPs. The specific role of PPP units varies significantly across countries, but the requisite skills required are universally uniform and include financial, legal, economic and project management skills. These skills are deployed to assess whether PPPs achieve superior value for money proposition compared to the traditional procurement route (OECD 2012:9). Some of the more general roles of dedicated PPPs include policy guidance, approval of PPP projects, technical support to government entities, capacity building and promotion of private sector participation in infrastructure projects (OECD 2010:32).

Van den Hurk, Brogaard, Lember, Petersen and Witz (2016:2) identify additional functions of PPP units to include training, project promotion, financial evaluation and approval of projects. Notwithstanding the various roles in each country, in general, dedicated PPP units or the Special Purpose Agency (SPA) have several benefits which include the following (World Bank Group 2015a:12; Rachwalski & Ross 2010:285):

- i. Given that most PPP projects will be centralised, greater opportunities for learning-by-doing exist which build capacity and expertise in the long-run.
- ii. There is greater possibility for dedicated PPP units to resemble features of a privately run institution, which enhances its appeal and attractiveness for private sector partners to collaborate effectively.

- iii. Specialised PPP units lower the cost of bidding and document preparation given the existence of some best practice and standardised protocols and processes.
- iv. Bureaucratic inertia may be prevented if the approval process is largely left to technical people.
- v. PPP units have a strong signalling-effect to the market showing government's commitment to attract private sector investment.

The OECD (2010:33) conducted a survey of 18 countries to determine the location of PPP units within their government set up. The survey concluded that in 12 countries, PPP units are located in the Ministry of Finance or an equivalent ministry or department. In other countries, PPP units are independent agencies (for example Partnerships Germany and the Public and Private Infrastructure Investment Management Centre in South Korea).

Additional to establishing PPP units at national or federal government level, several countries have created sub-national (provincial or state level) PPP units to further promote PPP adoption and implementation. Large cities or metropolitan municipalities may also establish their PPP units to further devolve investment decision-making powers to lower levels of government rather than relying on central government which may be time consuming. Examples of state level PPP units can be found in Australia, Canada, Germany and India, to support government entities wishing to explore PPP projects. The decentralisation of PPP units allows for the use of local intelligence in the assessment of PPP projects which may aid timely decision-making processes (Farquharson, De Mastle, Yescombe & Encinas 2011:25; OECD 2010:34). In instances where state level or municipal level PPP units are in place, the role of a federal or central government PPP unit would be capacity building and support to other PPP units to ensure coherent application of the PPP laws and evaluation criteria.

### **3.3.5 Additional factors**

Further to the broad factors discussed above, the World Bank Group (2015b:11) in conducting its benchmarking for PPPs, broadly utilises the following categories: (i) regulatory framework and institutional arrangements, (ii) PPP preparation, (iii) PPP procurement, (iv) unsolicited proposals, and (v) PPP contract management. PPP

procurement and management of unsolicited proposals may be classified as sub-components of competitive economy and legal and regulatory institutions, respectively. PPP preparation, on the other hand, reflects the technical ability by government and the private sector to prepare documents for PPP implementation. Technical capacity in the public sector may be in the form of dedicated PPP units, agencies dealing with financing and approvals, entities responsible for monitoring and auditing of PPPs and client departments e.g. the Department of Water for water PPP projects (Rachwalski & Ross 2010:278).

Farquharson *et al.* (2011:16) further outline the expectations of the private sector when accessing a PPP framework. They argue that a PPP framework should encompass the following features to ensure a conducive environment for PPPs to succeed:

- Non-ambiguity in the public policy rationale for using PPPs by government;
- Firm and consistent guidelines used by the public sector to select, prepare, and procure PPP projects;
- The approval process should be outlined and consistently followed from project selection, preparation, procurement and execution;
- Well defined dispute resolution mechanisms which may be provided via legislation or regulations or directives over and above the terms and conditions specified in the contracts; and
- Monitoring and evaluation of the contract and its implementation.

The OECD (2018:5) identified additional factors that influence private sector participation in PPP projects, namely macroeconomic environment, business risks (exposure to cyclical business cycles), regulatory and political risks, environmental risks if social impact studies are required and ability of the project to generate cash flow and sustainable returns. The OECD emphasises the importance of sub-sector specific considerations such as whether the infrastructure is centralised or distributed, serving urban or rural areas, among others. These factors influence the expected returns from the PPP investment.

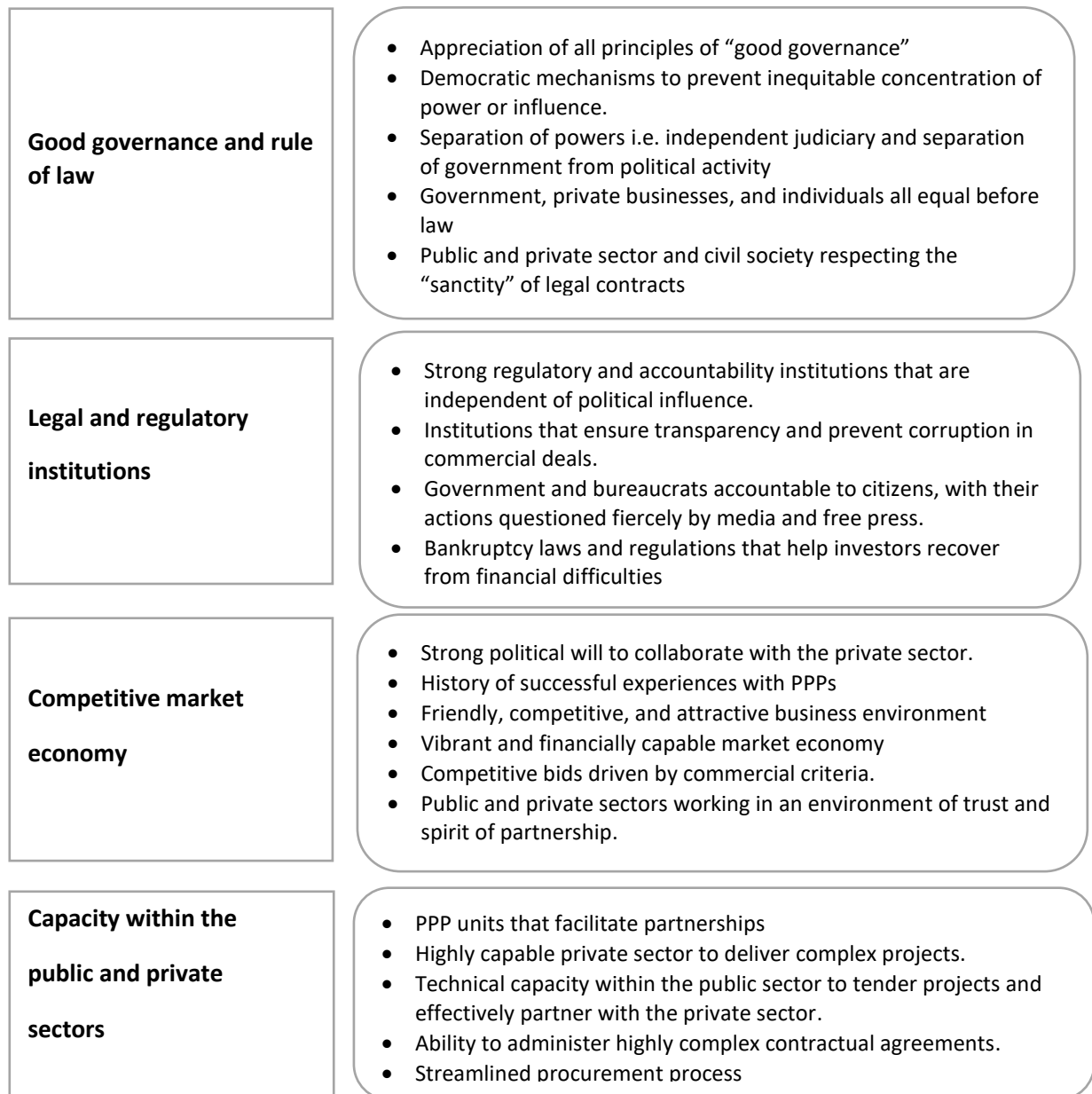
Ferk and Ferk (2018:32) argue that PPP implementation success is reliant on an effective contract management and monitoring mechanism put in place by the public sector partner. Linked to the legal framework, contract management should have provisions dealing with punitive or remedial clauses in the event of any breach. Mutambatsere (2018:68) elevates the centrality of stable macroeconomic environment as a driver for foreign investment in PPPs and argues that PPPs flourish in a country with a low inflation rate, stable and predictable exchange rates and exchange controls that are investor-friendly.

Iossa and Saussier (2018:36) consider the following factors as important in PPP success:

- The tender specification, design/structure of the contract and contract management;
- The specific features of the targeted sector are paramount including the composition of its market structure;
- The degree of macroeconomic volatility; and
- The overall regulatory and institutional framework of the country.

For the purposes of this study, the broad criteria used for benchmarking are legal framework governing PPPs, governance and rule of law, institutions available to support PPPs, and the extent of competition by the private sector in tendering for PPPs. **Figure 3.3** summarises the factors considered in this study to assess PPP frameworks in the selected countries.





**Figure 3.3: Framework for assessing PPPs’ success**

Source: Adapted from Biygautane *et al.* (2018:333).

Having established the broad parameters for evaluating PPP frameworks, the next step is considering the countries which witnessed high numbers of PPPs in the water sector and understand their PPP frameworks. In other words, how did these countries manage to have many water PPPs and whether their PPP framework plays a big part in their success. These countries are discussed below starting with the

general geographic location, economic characteristics and legal framework for PPPs, among other factors.

## 3.4 China

### 3.4.1 Background

The People's Republic of China (hereafter referred to as China), is located in East Asia and borders several countries such as Mongolia, Kazakhstan, Nepal, Myanmar, Vietnam and Russia. The National Bureau of Statistics of China (2019) estimates that the population of China by the end of 2018 was approximately 1.395 billion. China has the largest population in the world. Based on 2019 figures, the economy of China is estimated to be US\$14.14 trillion which is the second largest globally after the United States of America (USA). It is estimated that 60 per cent of the population in China reside in urbanised areas (Central Intelligence Agency (CIA) World Factbook 2020).

China has a three-tier administrative system dividing the nation into provinces, autonomous regions and municipalities. China has 22 provinces, five autonomous regions, namely Guangxi, Inner Mongolia, Ningxia, Tibet (Xizang) and Xinjiang; four municipalities (Beijing, Shanghai, Tianjin and Chongqing) and two special administrative regions (Hong Kong and Macau) as shown in **Figure 3.4**. A province or an autonomous region has several counties and cities and towns. The four municipalities are directly under central government control given their economic significance. The special administrative regions exhibit provincial level characteristics but have the highest degree of autonomy, yet are directly under the central government (Ip 2016:955; China.org 2020). Hong Kong historically was under British influence and largely adopted western practices in most areas of government and business (Chan, Lam, Chan, Cheung & Ke. 2009:1115). The subnational governments, while enjoying varying levels of discretion, experience strong influence and control from the central government. The reform process in China is considered as a top down approach in that central government sets the policy direction and uses control measures for subnational governments to comply through government processes or a political party hierarchy (Qian & Mok 2016:189). Given the discussion above, the governance system in China is largely unitary and considered more

decisive in addressing policy coordination problems associated with a system with many players with some veto powers (Araral & Wu 2016:2).



**Figure 3.4: Map of China**

Source: CIA (2020).

There are differences and similarities between China and South Africa in respect of the socio-economic factors, culture, access to resources and income inequality. The Chinese transition from a largely government controlled economy to a fairly open and market based economy has not benefited the majority of the population. Conditions worsened as reflected by the Gini coefficient which “increased from 0.28 in 1980 to 0.44 in 2000 and 0.52 by 2013” (Cevik & Correa-Caro 2015:3). Li, Li and Wan (2018:33) estimate the Gini coefficient for 2016 to be 0.646 by using a different methodology which combines top income information together with traditional household survey data. The World Bank’s Development Indicators for 2020 estimate the Gini coefficient in 2016 to be 0.385. Irrespective of the varying estimates, the levels of inequality in China are high and mirror the conditions experienced in South Africa.

Approximately 400 of the 660 biggest Chinese cities are anticipated to face severe water shortages if demand patterns do not change. The uneven water resources within the Chinese regions exacerbate the water challenges in the future (Tortajada 2016:182). In addition, urban water and sewerage infrastructure systems have limited capacity to meet future demands as a result of underinvestment and insufficient human capital resources (Tortajada 2016:182). In terms of access to water, approximately 95 per cent of China's urban population access piped water for most of the day (Araral & Wu 2016:2). Despite progress being made by South Africa and China on water supply, challenges of water scarcity and sustainable management of scarce water resources are common as a result of urban migration (Araral & Wu 2016:2).

### **3.4.2 Evolution of PPPs and the legal framework in China**

The preceding section provided background to China, its governance system and other socio-economic indicators. This section outlines the evolution and legal framework for PPPs in China. The purpose of tracking the developments is to understand the nature of the reforms, their motivation, establish whether the reform met the envisaged objectives and assess whether there are lessons for South Africa. For an extended period of time, China had no formal laws governing PPPs and government instituted reforms which culminated in a national PPP policy (Guo, Martek & Chen 2019:19). The process to reach a national PPP policy evolved over time as presented in the chronology of events below.

The implementation of PPPs in China, as in many countries, is subject to legal requirements such as tendering guidelines, contract law or general government procurement regulations (Liu, Wang & Wilkinson 2016:705). PPP tendering has to conform to the Tendering Law of 2000, the Contract Law of 1999, and the Government Procurement Law of 2002. In addition, sector specific regulations have to be adhered to, for example, projects in the water sector need to comply with water related regulations (Liu *et al.* 2016:705).

In addition to legal requirements, central government policy pronouncements and directives are issued to provide further guidance on how private sector investment is or will be utilised in the provision of public services. At subnational government level,

opportunities exist to provide further clarification on how each sphere of government will approach implementation of PPPs. For instance, local government issue regulations directing how basic services such as water should be provided. Given the expansive nature of the regulations issued by the different levels of government, a foray into these regulations and directives however found them to be inconsistent between different levels of governments and across sectors, slowing down the planning and execution of PPPs. This is one drawback of not having a formal PPP law guiding all spheres of government (De Jong, Mu, Stead, Ma & Xi 2010:305).

The Chinese PPP framework has evolved over time to meet development needs, with improvements being made to address some of the shortcomings identified (Ke *et al.* 2014:1157). Wang *et al.* (2012:3) trace some of the developments in the PPP regulatory framework in China as reflected in **Table 3.2**. Guo *et al.* (2019:17) summarise the evolution of the Chinese PPP policy as comprising of four phases: “try, explore, expand and consolidate”. Some of the key reforms are explained in detail below.

**Table 3.2: Evolution of PPP policy (selected policy documents)**

Year	Document Title	Phasing by Guo <i>et al.</i> (2019:17)
1980s	No formal PPP policy except some clauses encouraging foreign investment in Chinese infrastructure. Rules encouraging foreign investment appeared in 1986	“Try” phase
1994	Local administrative measures on the concession of municipal utilities in Huherhaote and Hainan	
1995	Circular concerning the issues of absorbing foreign investment through Build Operate Transfer (BOT)	Exploration Phase
1995	Circular concerning the issues of the approval and administration of experimental foreign-invested concession projects	
1999	Contract Law of 1999	
2000	Temporary provisions of the Ministry of Construction on utilising foreign capital in municipal entities Tendering Law of 2000	
2001	Local administrative measures on the concession of municipal entities in Jilin and Dalian	
2001	Several opinions of the State Development and Reform Commission concerning the Promotion and Guidance of Private Investment	
2002	Notice of the General Office of the State Council on the relevant issues concerning the appropriate handling of the existing projects guaranteeing the fixed return from investments by foreign parties	

Year	Document Title	Phasing by Guo et al (2019:17)
2002	Opinions of the Ministry of Construction on Accelerating the Marketisation of Urban Utilities Government Procurement Law of 2002	
2003	Local administrative measures on the concession of Municipal Public Entities in Beng, Jiangsu, Sichuan, Hebei, Chengdu, etc	
2004	Administrative measures on the concession of Municipal Public Utilities	Expansion and fluctuations phase
2004	Sample document for the Franchised Operation of Urban Water Supply, Gas Supply and Waste Disposal	
2004	The Circular on Accelerating the Reform of Water Price, Promoting Water Saving Practices and Protecting Water Resources	
2004	Decision of the State Council on Reforming the Investment System	
2004	Local administrative measures on the concession of Municipal Public Utilities in Ji'nan, Guizhou, Shanxi, Xuzhou, etc	
2005	Several opinions of the State Council on encouraging, supporting, and guiding the development of individual and private economy and other non-public sectors of the economy	
2005	Local administrative measures on the concession of Municipal Public Utilities in Tianjin, Dongguan, Gansu, Qingdao, Xinjiang, etc	
2006	Sample document for the franchised operation of urban heat supply and waste-water disposal	
2006	Local administrative measures on the concession of Municipal Public Utilities in Hu'nan, Shanxi, Hefei, Wuhan, Shenzhen, Beijing, etc	
2008	Research reports of PPP Legislation in Infrastructure Development	
2009	Local administrative measures on the concession of Municipal Public Utilities in Shanghai	
2010	Draft of PPP Legislation by SDRC (unpublished)	
2010	Several Opinions of the State Council on Encouraging and Guiding the Healthy Development of Private Investment	
2013	Decision of the Communist Party of China central committee on several major issues concerning comprehensively deepening reform including private investment in infrastructure development	
2014	Establishment of the China Public Private Partnership Center (CPPPC) by Ministry of Finance	Boom and consolidation phase
2015	Implementation Opinion on the Promotion of PPP in Water Pollution Control by Ministries of Finance and Environmental Protection	
2015	Guiding Opinions of Advancing the Construction of Sponge Cities by the General Office of State Council	
2016	Notice on the promotion of PPP in energy issued by National Energy Administration	
2016	Notice on effectively implementing PPP related work in traditional infrastructure – issued by National Development and Reform Commission (NDRC)	
2016	Notice on the promotion of PPPs in Public Services by Ministry of Finance	
2016	Notice on the issuance of the interim measures on the financial management of PPP projects	
2017	Guidelines for issuing project bonds for PPP projects	



Sources: Guo *et al.* (2019:17-19); Wang *et al.* (2012:4); Qian *et al.* (2020:636); Xu (2016).

As presented in **Table 3.2**, in 1995, the Chinese government promulgated a number of measures to promote PPPs through a build operate and transfer (BOT) approach in various sectors of the economy such as thermal power, hydropower, highways and water supply. Measures promulgated were contained in several policy documents, circulars and directives which include: “Circular on Attracting Foreign Investment through BOT Approach (No.89 Policy Paper of 1994), and the Circular on Major Issues of Approval Administration of the Franchise Pilot Projects with Foreign Investment (No.208 Policy Paper of Foreign Investment)” (Qian, House, Wu & Wu 2020:636; Zhong, Mol & Fu 2008:866). Foreign investors soared after the proclamation of the “Circular on Attracting Foreign Investment” which guaranteed a specified rate of return. However, the preferential setting of guaranteed returns for foreign investors disincentivised local Chinese investors and this led to the reversal of such a directive in 2002 (Qian *et al.* 2020:636). Consequently, there was an increased number of cancellations of PPPs by foreign investors and the government stepped in to buy shares from foreign investors to stabilise the Chinese PPP market (Qian *et al.* 2020:636; Zhong *et al.* 2008:866).

The reforms were necessitated by the Chinese government’s commitment to attract private capital to be invested in infrastructure projects to foster economic development. The economic reforms in China in the late 1970s led to private sector growth but investment in public utilities by private capital only commenced in the early 1980s (Kayaga & Zhe 2007:7). The State Council, Development and Reform Commission (SDRC) and the Ministry of Housing and Urban-Rural Development periodically issued regulations to refine PPP arrangements in specific sectors of the economy (Wang *et al.* 2012:3). In 2002, a policy paper was issued to attract private sector investments in the utilities’ sectors. The Opinions on Accelerating the Marketisation of Public Utilities (No.272 Policy Paper of the MOC, 2002) commenced the marketisation reform of water by opening up opportunities for both foreign and domestic investors to compete on an equal footing. The objective was to introduce “multi-financing approaches, concession rights and management, clarity on pricing mechanisms and lessening of state monopolies” (Tortajada 2016:184; Zhong *et al.*



2008:866). Further reforms in the utilities sector occurred in 2004 with the policy paper on Measures on Public Utilities Concession Management (No.126 Policy Paper of the MOC, 2004) which clarified the mechanisms in which the private sector would be involved in public entities after being awarded concession rights (Zhong *et al.* 2008:866). Measures to provide clarity on the regulatory regime for water services were lacking and this was introduced with the promulgation of the “Opinions on Strengthening Regulation of Public Utilities (No. 154 Policy Paper of the MOC, 2005)”. This policy directive accentuates the centrality of water as both a public and social good (Qian *et al.* 2020:636; Zhong *et al.* 2008:866). Another significant policy change occurred in 2004 regarding municipal water tariffs under the directive “Accelerating the Reform of Water Price, Promoting Water Saving Practices and Protecting Water Resources”. This policy change resulted in water tariffs increasing between three to four-fold for the period 2004 and 2006 – this led to most municipalities achieving cost recovery tariffs which reassured investors of long-term profitability and sustainability of water PPPs (Qian *et al.* 2020:636). **Table 3.3** shows that major cities achieved cost recovery, especially in cities that implemented water supply PPPs.

**Table 3.3: Water tariffs in 36 major cities in China**

City	2000 (RMB/m <sup>3</sup> )		2014 (RMB/m <sup>3</sup> )	
	Water price	Final tariff	Water price	Final tariff
Fuzhou*	1	1.15	1.7	2.55
Guangzhou	0.7	1.03	1.98	2.88
Guiyang	1	1.4	2	2.7
Hefei	1.29	1.9	1.29	2.15
Nanjing	1.45	1.45	1.68	3.1
Kunming*	0.85	1.2	2.45	3.45
Nanning	0.72	0.97	1.48	2.65
Ningbo	1.2	1.2	2.4	3.2
Xiamen	1.8	2	1.8	2.8
Shanghai*	0.88	1.37	1.92	3.45
Shenzhen*	1.35	1.62	2.3	3.2
Taiyuan	1.2	1.4	2.3	2.8
Urumqi	0.7	0.85	1.66	2.6
Wuhan	0.85	0.854	1.52	2.62
Yinchuan	0.65	1.05	1.8	2.5
Changsha	0.87	0.87	1.7	2.46
Beijing	2	2	2.07	5
Chengdu	1.05	1.38	1.95	2.85
Dalian	1.8	1.8	2.3	3.1
Harbin	1.3	1.8	2.4	3.2
Haikou	1.1	1.3	1.55	2.35
Hangzhou	1.15	1.55	1.35	1.85
Hohhot	0.75	1.1	2.35	3
Jinan	1.75	1.75	2.25	3.15
Lasa	0.58	0.6	1	1
Lanzhou*	0.5	0.6	1.75	2.55
Nanchang	0.76	0.86	1.58	2.38
Qingdao	1.3	1.6	1.8	2.5
Shenyang*	1.4	1.6	1.8	2.4
Shijiazhuang	1.1	1.1	2.38	3.63
Xian	1.5	1.5	1.69	2.9
Xining	0.85	0.98	1.7	2.645
Changchun	1.85	2	2.9	4.2
Zhengzhou	1.1	1.1	1.5	2.4
Chongqing*	1	1.25	2.5	3.5
Tianjin*	1.18	1.4	1.3	4.9

\* Cities that use PPPs in the water supply sector.

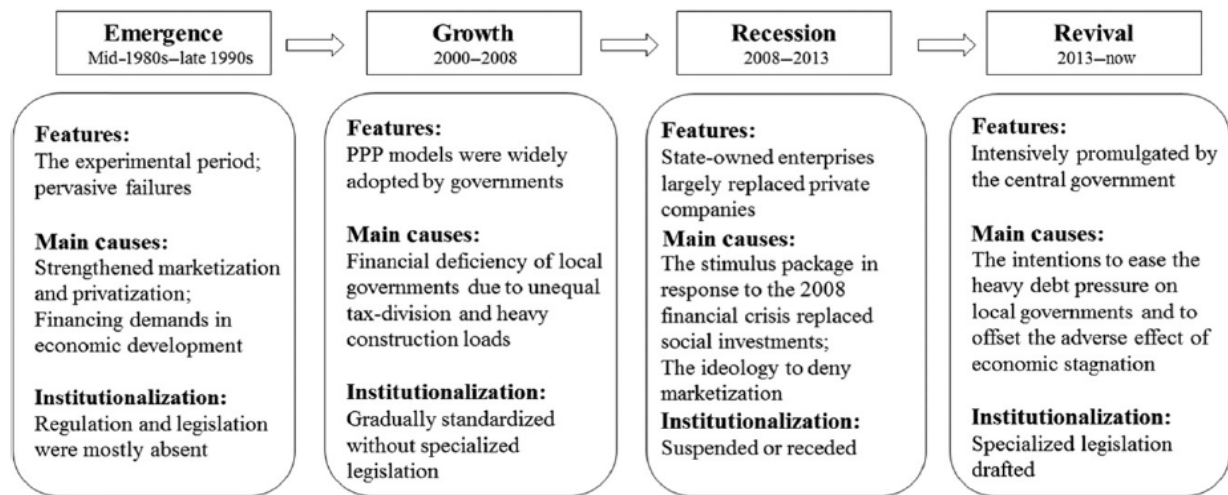
Source: Adapted from Qian *et al.* (2020:637).

The significant change in the evolution of PPPs came in 2013 during the 18<sup>th</sup> Chinese Communist Party Central Committee Meeting which decided to minimise government's role in the management and investment in the economy. The role of government transitioned from "direct provider of public goods to partner of private capital", ultimately providing a supervisory role of all PPP projects (Jones & Bloomfield 2020:7; The Economist Intelligence Unit 2015:27). The National Development and Reform Commission (NDRC) issued a Notice on PPP implementation in 2016 which proved to be a crucial intervention to reverse the three decades of fluctuation in the adoption of PPPs and pave the way to entrench PPP institutionalisation. This intervention was heralded as the first national-level act

designed for PPP projects (Li & Song 2018:121). The various changes to the PPP framework were done through change in policies, general directives and opinions of ministries addressing specific issues and simultaneously accommodating regional dynamics. However, the directives had limited legal force and some PPP projects under the refined regulations were not completed (Li & Song 2018:121).

In contrast to Guo *et al.* (2019:17) as reflected in **Table 3.2**, Li and Song (2018:116) argue that the evolution of Chinese PPPs has four phases (summarised in **Figure 3.5**) with slightly different time frames, namely:

- i. Emergence: this phase involved privatisation of some public assets and adoption of initial PPPs with insufficient institutional arrangements.
- ii. Growth: Limited fiscal space for government to fund all infrastructure requirements led to the enhancement of institutional structures to support PPP. Institutional protections were enhanced during this period, but it is still inadequate.
- iii. Recession: The global economic crisis in 2008 led to private companies worst affected which led to state owned entities forming partnerships with other spheres of government. This effectively became public public partnerships and led to the suspension of the institutionalised PPP procedures.
- iv. Revival: A surge in the demand for private sector investment was witnessed by local governments leading to an increase in PPP projects. To support this increase, PPP legislation was initiated.



**Figure 3.5: Phases of the PPP evolution in China**

Source: Adapted from Li and Song (2018:117).

### **3.4.3 Institutional set-up and reforms supporting water PPPs in China.**

The preceding section traced the evolution of PPPs in China. This section describes the institutional set-up and reforms specific to the water sector in China. The objective is to understand the underlying reasons for the upward trajectory in water infrastructure PPP projects in China.

Dating from the 1970s, the water and sanitation sector in China was controlled by the central government with services delivered almost for free as part of a social welfare package (Wu, House & Peri 2016:162). Towards the end of the 1970s, market-oriented reforms kicked in, but urban water supply remained under central government control on the basis that water is a public good (Wu *et al.* 2016:162). Similar to other developing countries, China experienced rapid industrialisation and urban migration forcing enormous pressure on most basic services, including water services. In 1978, approximately 170 million people (18 per cent of the total population) lived in urban areas and this increased to 750 million people by 2014 (55 per cent of the total population). The rapid urbanisation constrained public services and more investments in public infrastructure were required (Li 2018:30). Between 1998 and 2010, the rate of industrialisation increased exponentially leading to increased urban water consumption with limited infrastructure to support this increase. Consequently, water shortages in approximately two-thirds of Chinese cities were prevalent (Wang *et al.* 2018:8) and 25 per cent of the municipal water

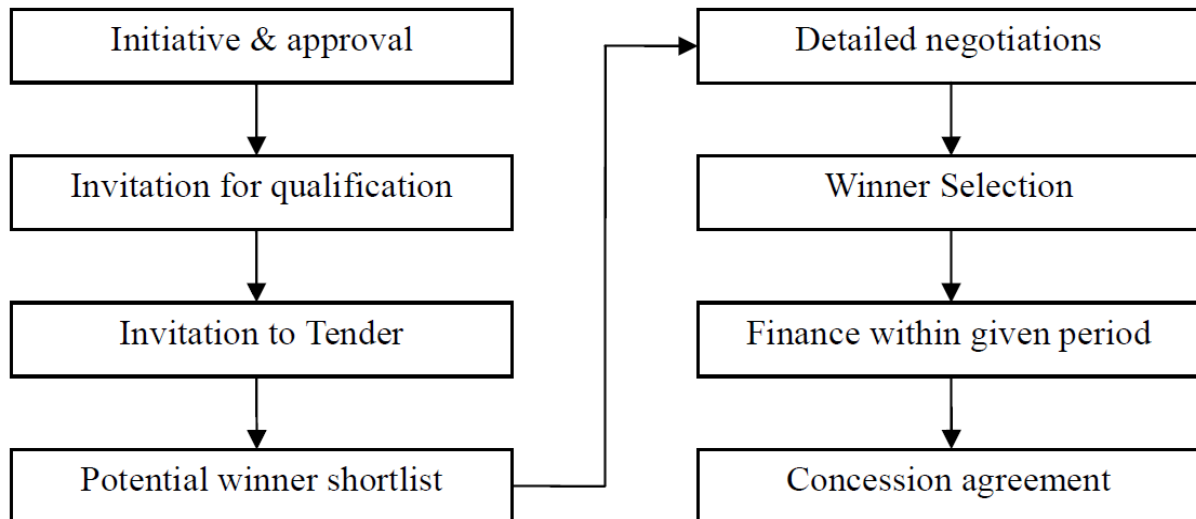
utilities experienced low water pressure to more than 40 per cent of their service areas (Jiang & Zheng 2014:156). As a way of dealing with a growing demand for water services and limited financial resources, the Chinese government invited the private sector to participate in water supply and to improve public sector performance (Li 2018:30; Wu *et al.* 2016:163). PPPs in China were initially stimulated by the experiences of the United Kingdom, France, Chile and Malaysia (Li 2018:30).

PPPs at a local government level were first introduced in the mid-1980s which coincided with the inception of the privatisation debate in China (Guo *et al.* 2019:17; Wang *et al.* 2012:3). The opening up of markets in China towards the end of 1980s resulted in the increase in PPP projects in water infrastructure (Tortajada 2016:182; Dong *et al.* 2016:215). Urban water supply PPPs were introduced in 1992 leading to a much more formalised reform agenda in 2001-2002 (Li 2018:31). The formal PPP reforms led the Chinese National Planning Committee in 2001 to issue a policy document 'Suggestions to promote and guide private investments' (De Jong *et al.* 2009:302). Subsequent to this directive, private investment in the water sector improved and by 2007, 33 per cent of the medium to large municipal water utilities had private sector partners playing a role in water delivery (Jiang & Zheng 2014:156). The Policy Note advocated for extending inducements to the private sector to persuade them to invest in water infrastructure projects. PPPs in the water and sanitation sector in the 1990s were initially introduced as national schemes to entice investment from overseas (Wu *et al.* 2016:163). Further reforms such as liberalising water tariffs under the Urban Water Management Pilot Scheme in 1997 and the Urban Water Price Regulation in 1998 attracted overseas investment in the water sector through PPPs. The overseas investors were guaranteed competitive net return of between 8 to 10 per cent to invest in Chinese water projects (Wu *et al.* 2016:162). Since 2000, China subsequently witnessed a massive growth in water and sanitation PPPs, making China among the world's most active PPP markets (Powell & Yurchenko 2020:101; Wu *et al.* 2016:154). Between the period 2001 and 2012, "237 PPP projects in water and sanitation reached financial closure in China, accounting for 40 per cent of the total number of such projects globally" (Wu *et al.* 2016:154).

#### **3.4.4 Competition in the tender or bidding market**

The key tenets of NPM involve among others, decentralised bureaucracy, fostering competition by the introduction of outsourcing of some of the public services and adoption of private sector management styles (Nasrullah 2005:202). For PPPs to work, conditions that promote effective competition should prevail and the starting point is usually at the tendering stage. Introducing PPPs without competition will not have the desired effect as it is tantamount to replacing an inefficient public utility with an equally inefficient private partner. The rationale for PPPs emanates from the competitive process which leads to reduced costs and improved efficiency in the delivery of the services (HM Treasury 2015:13). Markets that exhibit greater contestation and competitive rivalry can efficiently allocate scarce resources more effectively and this translates to low costs and enhanced public interest (Obradović *et al.* 2018:168; Zekri & Easter 2007:574).

Private sector participation in the water sector arising from a competitive procurement process is important in improving water supply within prescribed standards. Competition is promoted based on how PPP laws or procurement laws are structured. PPP procurement laws or regulations should permit competition from overseas bidders who may introduce additional sources of expertise, technology and finance. This is the case in China. To promote competition, PPP procurement in China is subject to the Tendering and Bidding Law of 2000, the Contract Law of 1999, and the Government Procurement Law of 2002 which make provision for a competitive bidding process (Jones & Bloomfield 2020:10; Liu *et al.* 2016:705). The bidding process for PPPs in China is illustrated in **Figure 3.6**.



**Figure 3.6: Bidding and approval process in China**

Source: Wang *et al.* (2012:11).

Despite the existence of the regulations to promote competition, information asymmetry is a consistent issue in China. For instance, information on shortlisting procedures, the evaluation process and contract negotiations is not disclosed to the public. Inconsistency in the actual implementation of the procurement laws is common in China. The market is technically open for private sector participation, but in reality, public sector officials act as gate keepers constraining the non-public actors to freely bid and compete for PPP contracts (Jones & Bloomfield 2020:10). Gate keeping by public sector officials also creates room for unethical behaviour such as corruption. Corruption takes place at “decision stage, tender stage and during contract execution” (Iossa & Martimort 2011:2). Corruption compromises value for money for the public and in 2008, 64 out of 106 audited PPP projects showed evidence of being susceptible to corruption (Iossa & Martimort 2011:2). These challenges have however not stalled the PPP adoption in water infrastructure projects in China for the reasons explained in **Section 3.4.6**.

### **3.4.5 Institutions to support PPPs in China**

As discussed earlier, effective PPP frameworks require institutions to support the PPP project cycle. This section outlines the institutions set up by the Chinese government to support PPPs. During the initial two decades of PPP reforms in China, there was no entity at central government level tasked with spearheading



PPPs as is the case in the UK (Partnerships UK) and the USA (National Council for Public-Private Partnerships) (Wang *et al.* 2012:9).

As PPPs achieved policy acceptance or traction, the Chinese government established institutions dedicated to the development and advancement of PPPs in China. The National Development and Reform Commission (NDRC) which was the successor of the State Planning Commission was among the first institutions to support PPPs in China including the Ministry of Finance (MOF). The NDRC is considered as the think tank for Chinese government policy and is responsible, among others, for the formulation and implementation of national economic and social development strategies, planning and coordination of infrastructure investment in the country, and overall economic restructuring initiatives and monitoring of government programmes (Mehrotra 2014:18). The Ministry of Finance is responsible for Chinese fiscal matters and budgets including economic policy issues. The respective roles of the NDRC and the MOF are well articulated, however, there is a blurring of mandate as both develop PPP guidance and provide support. It is argued that this contradictory and overlapping mandate is caused by bureaucrats unwilling to relinquish power (The Economist Intelligence Unit (EIU) 2015:27).

To mitigate coordination failures, in December 2014, the MOF established the China Public-Private Partnerships Centre (hereafter referred to as the CPPPC). Guo *et al.* (2019:2) argue that the CPPPC was initially set up to promote and collect data on PPPs and conduct PPP policy research and advocacy (information source and communication). The CPPPC's role includes the following (Xu 2016; CPPPC 2020):

- Management platform: where government officials apply to register, review and analyse PPP projects.
- Information platform: advocacy function responsible for providing information on PPPs, formulating PPP guidelines, providing technical support, conducting research and publishing case studies.
- Providing training and capacity building.
- Developing operational guidelines and contract guidelines.
- Facilitating financing for PPP projects.

Despite the existence of the CPPPC and its role, Jones and Bloomfield (2020:8) persist in arguing that there is no focussed national PPP government agency in China. Their persistence is based on, firstly, how the CPPPC is structured and its role given the Chinese context of largely centralised economic planning, and secondly from experiences from other countries, specifically the role of specialised PPP units. The assertion by Jones and Bloomfield (2020:8) is shared by The Economist Intelligence Unit (EIU) which argues that China is yet to develop a coherent and consistent national PPP policy framework. Deliberations to establish joint forums encompassing the NDRC, the MOF and other sector ministries, were envisaged to improve coordination and entrench policy consistency (EIU 2015:10).

PPP projects in some instances are treated with a traditional approach guided by general procurement regulations. In other instances, the “State Council and various Ministries issue PPP regulations in the form of opinions, notices and decisions” despite having an institution such as the CPPPC (Ke *et al.* 2014:1157).

#### **3.4.6 Experiences of water PPPs in China**

The remnants of the socialist-planned Chinese economy with strong central government still cause discomfort to some foreign investors as the full transition to a market economy has not materialised. However, from 2015, the Chinese central government initiated several PPP projects and investors had concerns about the lack of sufficient legal protection (Ferk & Ferk 2018:18). The implementation of the water sector PPPs in China initially faced several challenges which resulted in the cancellation of 12 of the 32 projects that reached financial closure between 1994 and 2000 (Wu *et al.* 2016:163).

China’s PPP experience has not always been smooth and faced some challenges. One such challenge which was later resolved was the preferential guaranteed returns for foreign investors. The preferential setting of guaranteed returns to foreign investors disincentivised local Chinese investors and this was subsequently reversed in 2002 which led to a number of cancellations of PPPs and government moved in to buy shares from foreign investors (Guo *et al.* 2019:17; Zhong *et al.* 2008:866). Despite the increase in cancellations, PPPs in China’s water sector witnessed significant growth between 1999 and 2009 recording almost 66 per cent of global

new PPPs in the water sector in 2006. Chinese-based private investors are the most active participants in the water PPP projects, serving water to 37 per cent of the population in comparison to 19 per cent attributable to foreign companies (Wu *et al.* 2016:153; OECD 2009:97).

Despite the large number of PPP projects, several challenges in the PPP project cycle still exist in China. China still lacks protection of private property rights or private asset ownership rights and this emanates from the strong remnants of a centrally planned economy where infrastructure investment has been the responsibility of government (Li & Song 2018:124). Xu (2016) notes the following additional challenges in the promotion of PPPs:

- funding through PPP disguises the inefficient financing of infrastructure projects by most local governments;
- the regulatory framework and policies guiding PPPs still have flaws which require further attention;
- the current exit scheme for private capital needs to be improved; and
- limited professionals and experience in PPPs.

The Chinese experience with PPPs in the water sector has not always been smooth, especially during the infancy period. However, as the system matured some of the problems were addressed, and yet others persist. Some of these challenges include the following (Tortajada 2016:183; Beh 2009:7):

- much focus on attracting private sector investment rather than deepening market competition in the procurement phase;
- institutional coordination failures among various agencies in the water sector;
- water infrastructure funding challenges in the poorest parts of the country;
- strong attention to short-term objectives of accelerating delivery of public services without entrenching long-term contractual partnership; and
- limited administrative capacity and political oversight of PPPs including projects in the water sector.

#### **3.4.7 Why PPPs increase despite poor governance?**

The setbacks encountered by China in its regulatory framework did not stall PPP development, as the Chinese authorities together with the private sector sought to

proactively resolve any shortcomings by introducing legislative reforms (Wu *et al.* 2016:164).

In terms of governance, China has a largely unitary form of government which is sometimes considered more decisive in addressing policy coordination problems associated with a system with many players with some veto powers (Araral & Wu 2016:2). China is a state-led and state-run economy; yet it has embraced PPPs and experienced more investments in the past twenty years like any other country (Jones & Bloomfield 2020:1). The argument advanced by Jones and Bloomfield (2020:2) is not that market liberalisation brought about the benefits of PPPs in China, rather, the Chinese government is using PPPs “as a mechanism to consolidate state control over the economy”. Chinese government officials use PPPs to access finance but there is minimal mutual benefit to private partners (Jones & Bloomfield 2020:2). The weak PPP regulatory framework creates ground for government officials to evaluate PPP projects on a “case-by-case basis” which easily opens up the possibility of advancing their self-interest through manipulation of the approval process (Jones & Bloomfield 2020:8).

The Chinese water PPPs were adopted in the 1990s with significant challenges experienced during initial phases of implementation, but the progress has been tremendous, due to the following four factors, namely (Wu *et al.* 2016:162):

- formidable political support across different layers of government;
- a more cohesive vision including legal and policy framework;
- solid connections between local businesses and international investors with technological expertise; and
- reforming tariff structures to reflect costs incurred in providing the service.

China’s economy still resembles features of a command economy and the extensive use of PPPs has blurred the demarcation of public and private sectors, creating an impression that PPPs might in actual effect be classified as public public partnerships (Boardman *et al.* 2016:5). The perceived success of the PPPs in China may in actual effect encompass some public public partnerships (Boardman *et al.* 2016:5).

In summary, China experienced a remarkable shift from a centrally planned water sector to a market-based sector. The legal and regulatory framework for PPPs and water sector reforms still requires further attention in a few areas, such as transparency in the procurement process and consistent application of PPP procedures. China's experience shows that despite the shortcomings in the legal and regulatory framework, strong political will and tariff reforms in the water sector overshadow the weakness and achieve superior results measured by the growth in PPP infrastructure projects.

Rothstein (2015:533) refers to the success of China on the economic front yet this is marred with administrative capacity constraints as a paradox. The Chinese paradox refers "to the fact that in all commonly used measures of levels of corruption and the quality of government, China is a country that scores quite low. China is marked by high commitment to a specific policy doctrine and is well suited for effectively implementing policies for economic and social development" (Rothstein 2015:533).

## **3.5 Mexico**

### **3.5.1 Background**

Mexico is located at the heart of the Americas and is part of North America, but its language, historical roots and culture make it part of Latin America as well. Mexico's neighbouring countries include the United States of America (USA), Guatemala and Belize, as shown in **Figure 3.7**. Similar to South Africa, Mexico is endowed with natural resources which act as a catalyst for productive capacity of any country. Mexico is the 12<sup>th</sup> largest oil producer and 15<sup>th</sup> largest oil exporter in the world (Mexico Projects Hub 2020). Mexico is a representative, democratic and federal republic with 32 states and 2 456 municipalities (Saleth & Dinar 2000:180; Mexico Projects Hub 2020). The economy of Mexico is estimated to be US\$2.4 trillion which is the 11th largest in the world. Approximately 80 per cent of the Mexican population reside in urban areas (CIA 2020). The population of Mexico is estimated at 128 million (González, Lartigue, Hidalgo, Hernández & Espinosa 2018:283).



**Figure 3.7: Map of Mexico**

Source: CIA World Fact Book 2020.

Comparable to South Africa, Mexico has high levels of inequality which are progressively intensifying compared to other countries in North America. Inequalities are observed in several facets of life such as income, socio-economic, environmental and cultural point of view. The World Bank's Development Indicators of 2020 estimate that the levels of income inequality measured by the Gini Index for 2018 is 0.45 (World Bank Group 2020). Access to public services such as quality water is still a challenge in Mexico and this is exacerbated by inefficient network operations and general management of water resources (González *et al.* 2018:283). In general, access to basic services is based on socio-economic status with high income earners having a full array of basic services (Wilder, Martínez Austria, Hernández Romero & Cruz Ayala 2020:28; Tortajada 2006:333). Despite access differences based on socio-economic status, the Federal Tribunal of Judges in 2012 affirmed water access as a human right which municipalities have to provide, even to the poor (Wilder *et al.* 2020:28). The ruling by the Judges led to changes of Article 4 of the Constitution and the promulgation of the General Water Law to execute the ruling that affirms water as a human right. The General Water Law provides a standard or guideline for universal implementation of water access in Mexico (Wilder *et al.* 2020:28).

In 2015, the National Water Commission (CONAGUA or CNA) estimated that 92 per cent of Mexicans had access to drinking water (González *et al.* 2018:283; Wilder *et al.* 2020:28) and this increased to 94 per cent in 2020 (Netherlands Enterprise Agency (NEA) 2020:2). The access levels differ between urban and rural areas with 96 per cent of urban dwellers having access to water compared to 82 per cent in rural areas (González *et al.* 2018:283). Access to water in the Mexican context refers to the population that has piped water in their houses or yards or those that are able to get water from a public source or even through neighbours. Access to water is not equivalent to quality water, as evidenced by the consumption of bottled water by approximately 80 per cent of the urban residents (González *et al.* 2018:283). The NEA (2020:3) highlights that Mexico has the highest consumption of bottled water and people in rural areas walk for more than 5 kilometres to access potable water.

In Mexico City, the capital city of Mexico, the water provider claims that the tap water meets the required standards, but independent studies have shown that over 1 million people representing 12 per cent of the residents do not receive quality potable water (González *et al.* 2018:283).

Similar to South Africa, Mexico's water sector faces challenges such as weak and inefficient governance systems, inadequate maintenance, under-recovery of costs, and inadequate billing and collection performance (González *et al.* 2018:289). Inefficiency of network operations results in 25 per cent of households not accessing water daily, and water losses through leaks average between 30 to 50 per cent in some Mexican cities (González *et al.* 2018:289). PPPs are therefore considered as one of the avenues to address some of these challenges.

### **3.5.2 Evolution of PPPs and the legal framework in Mexico**

PPPs in Mexico can be traced back to the 1980s with an unsuccessful attempt to finance road infrastructure projects (International Monetary Fund (IMF) 2006:9). In 1989, the federal government approved private sector funded toll roads in various cities in Mexico. By 1997, the private sector funded toll roads but encountered several problems and government stepped up to rescue 23 projects out of the 52 toll road projects. The main problems were incorrect traffic-volume estimates (feasibility study limitations), a short concession period of 15 years and poor planning and project management (White & Case 2014:4). The situation in Mexican toll roads was



exacerbated by the devaluation of the peso in 1994 which worsened the repayment of debt denominated in US\$. To avoid a total collapse of the system, government created Fideicomiso de Apoyo al Rescate de Autopistas Concesionadas (FARAC), to take over the toll roads on concessions beyond 30 years with Mexican peso-denominated debt as opposed to US\$ indexed debt (White & Case 2014:4). FARAC was later privatised.

From the mid-1990s, taking into consideration the experience from toll roads, Mexico's PPPs achieved success in the energy sector and this propelled consideration for PPPs to be extended to other sectors such as water (International Monetary Fund 2006:9). Another form of PPP programme was referred to as Projects for the Provision of Services (PPS). The PPS Programme was launched in 2002 under the Ministry of Finance to create a launch pad for the PPS Programme (Farquharson *et al.* 2011:50). The launch of the PPS preceded the formal enactment of the Law of PPPs which occurred in 2012, several years later (Rojas 2020). The pre-2012 period was characterised by piecemeal procedures and decrees with limited to non-existent legal effect. The only avenue for resolving contractual disputes was through the Mexican court system, as opposed to further international arbitration as is the case in several countries (White & Case 2014:4).

The comprehensive legal framework to support PPPs in Mexico received impetus with the introduction of the Law of Public-Private Partnerships which was gazetted in 2012 and the corresponding guidelines enacted in December 2013. The 2012 Law of PPPs was modified in 2018 to provide further clarity on emerging challenges. The 2012 Law of PPPs contains several features that provide greater certainty to developers and investors. The following key changes were identified (White & Case 2014:3):

- the bidding process was clarified and made transparent including the requirement for requests for proposals to be widely advertised;
- minimum prescribed terms – rights and obligations of each party to a PPP arrangement are clearly defined to enable developers and private partners to assess their risks upfront; and

- dispute resolution mechanisms – the law expressly recognises both domestic and international arbitration in line with the United Nations Commission on International Trade Law (UNCITRAL) Model Law on Commercial Arbitration.

The 2018 Law of PPPs is applicable at all levels of government with an additional provision allowing states and municipalities to develop their own PPP frameworks in accordance with existing national law. Examples of states and municipalities that developed separate PPP frameworks are the State of Baja California, the State of Veracruz de Ignacio de la Llave and the State of Mexico and several municipalities (EIU 2019:39).

Mexico's Ministry of the Economy summarises the Law of PPPs as the following:

*“In addition to condensing law provisions that were previously disorganised into a single, cohesive law, this new legal framework unlocks the potential to expand the private sector investment and thus further accelerate the growth of the infrastructure that Mexico needs to increase its global competitiveness.”*

Since the enactment of the 2012 Law of PPPs, over 100 projects went through the bidding process across several sectors of the economy such as health, transportation, telecommunications, and social- and water infrastructure. To facilitate full disclosure on bids and awarded projects, two web-based information hubs were created, namely CompraNet and Mexico Projects Hub. CompraNet is an information centre showing the status of projects, the bidding process, procurement and other related services. On the other hand, Mexico Projects Hub lists all infrastructure projects requiring private investment and acts as an investor-relations interface linking projects to potential funders both locally and abroad (Rojas 2020). The Mexico Projects Hub was initiated by the federal government with the management of the programme done by the National Bank for Public Works and Services (BANOBRAS) (Mexico Projects Hub 2020).

### **3.5.3 Institutional set-up and reforms supporting water PPPs in Mexico**

The National Water Commission (CONAGUA) in Mexico is responsible for management of water resources in the country. Some of its functions include “the study and conservation of the hydrological cycle, management of water concessions

for all uses, maintenance of water quality, regulation of water use, administration of the federal water infrastructure, conservation of rivers and emergency management, and investment in drinking water supply, sanitation and irrigation” (Wilder *et al.* 2020:34). In addition to CONAGUA, there are State Water Commissions (CEAs) in each state whose role is to regulate, coordinate and provide support to municipalities and also set water tariffs for municipalities (Wilder *et al.* 2020:36).

The institutional reforms in the water sector in Mexico are attributed to 2 main factors, namely, (i) adoption of market-based principles, and (ii) decentralisation of service provision from federal to states and municipal government. Market-based reforms were adopted within the neoliberal economic policy between 1980 and 1990 which promoted the user pay principle and cost recovery of services (Hearne 2004:9). This section will chronicle the changes in the institutional set-up of the water sector in Mexico and the associated reforms to promote the use of private capital in public services.

From around 1917, the Mexican federal government was the custodian of all water resources in Mexico. Article 27 of the 1917 Constitution grants the President the power to control water resources. The President has since delegated this responsibility to the Ministry of Water Resources resulting in further delegation to the National Water Commission (CNA) (Hearne 2004:3). Mexico’s water and sanitation sector has historically been managed and operated at the federal level until 1947 when the federal government created Potable Water and Sanitation Federal Boards in an attempt to decentralise water provision (Anwandter & Ozuna 2002:689). In 1956 the “Ley de Cooperación Para la Dotación de Agua Potable a los Municipios” water law was enacted leading to the creation of Direct Administration Systems (also known as *Sistemas de Administracion Directa*) (Ozuna & Gomez 1998:3).

Further reforms continued into the 1980s with the creation of municipal potable water committees, transitioning to water utilities managed by state governments (Anwandter & Ozuna 2002:689). The reforms continued in 1989 leading to the creation of the National Water Commission (CONAGUA or CNA). The regulatory framework in the water sector provides for regulation at national and local level presenting some level of complexity (Wilder *et al.* 2020:35). Federal government retains ownership of all water bodies in Mexico through the CNA. The CNA is an

“agency of the Ministry of the Environment and Natural Resources” and is decentralised across 13 regional areas. The CNA’s main responsibilities include “administration of national waters, management and control of the hydrologic system; promotion of social development; maintaining water quality and encouraging water use efficiency” (CONAGUA, OECD & IMTA 2010:4). In addition, the CNA takes leadership in water policy development as stipulated in the National Water Plan (Wilder *et al.* 2020:34; WorldWide Fund for Nature (WWF) 2011:21; CONAGUA *et al.* 2010:4).

The CNA recommended further decentralisation of water supply from the state to the municipal level and the creation of an autonomous regulator for the water sector which permitted water entities to institute strict credit control for non-payment of water services (Arroyo-Rincon 2016:40; Wilder *et al.* 2020:35; Anwandter & Ozuna 2002:690).

The reconfiguration of the water sector endured leading to the enactment of the National Water Law of 1992 (NWL of 1992), with further amendments in the law in 1994 (NWL of 1994). Both the 1992 and 1994 NWL created an impetus for the water sector reforms in Mexico leading to the granting of water concessions valid for 50 years. The concessions granted the users water rights for the defined period though ownership of the water resources remained with government. To promote economic activity, the transfer of concessions from one party to another was permitted after fulfilling requirements set by the CAN (Hearne 2004:4).

The extent of the implementation of the reforms differs across various Mexican states, culminating in a mixture of regulatory regimes across the board (Anwandter & Ozuna 2002:689). The responsibility for urban water and sanitation provision in Mexico has gradually shifted from federal government to municipalities (World Bank Group 2003:46). Decentralisation was a response to political reforms and the need to have services delivered by lower levels of government, but decentralisation did not lead to loss of federal government’s influence given the centralised political system granting the president extensive powers (Hearne 2004:8).

While the Constitution of Mexico conferred the responsibility of water supply to municipalities, the federal government on the other hand promoted a system of municipal dependence on central government and states (Wilder *et al.* 2020:35;

Hearne 2004:4). This dependence is based on the financial support and policy development role by central government in the water sector. It appears that municipalities are unable to untangle themselves from central government influence (Hearne 2004:4). In terms of the Constitution, state governments have powers to intervene or assist municipalities in rendering services where the municipalities are not able or lack capacity to provide services. However, in practice, municipalities depend on state legislatures to issue directives on how such services should be delivered (Miranda 2003:78).

Collectively, the reforms are attributed for the success in the roll-out of PPPs in water supply in Mexico. The private sector is involved in service contracts and concessions and this promotes knowledge sharing between municipalities, regulators and the private sector providers to attain experience before complex projects are initiated (Hearne 2004:9). Despite the PPP efforts, municipalities are failing to achieve cost-recovery as numerous water connections are not registered and are therefore illegal connections. Estimates indicate that there are about 2.5 million illegal water connections in the Mexico City region representing 36 per cent of all water connections (Tortajada 2006:370).

#### **3.5.4 Competition in the tender or bidding market**

In Mexico, the process leading to the awarding of a contract to the private partner to provide public services follows defined steps prescribed in procurement laws. The following steps are paramount (Alfonso & Castillo 2019):

- a) An expression of interest – it is mandatory for public administrators to publish a tender notice inviting private sector or interested parties to take part in the process. Invitations are published on government websites and the official federal gazette among others and specify the technical requirements for the tender.
- b) Requests for proposals and unsolicited proposals - bidders are required to submit a technical and an economic proposal for the project.
- c) Evaluation and contract finalisation - verification of compliance is done at this stage including technical and financial proposals, leading to the selection of the preferred company.

Water provision is characterised by a single provider supplying water in a designated area. Competition is unlikely after the tender is awarded and this may lead to potential abuse if tariffs are not regulated. Regulation by government to limit potential abuse by private operators may be in the form of a sector regulator or an economic regulator. In Mexico, regulation at the local level is very limited but CONAGUA tracks and publishes national data on service performance, tariffs and water access. This information is collected in the process of monitoring private operators. Local authorities started establishing regulators around 1992 but the regulation is still weak (OECD 2009:106-107).

### **3.5.5 Institutions to support PPPs**

Mexico does not have a dedicated agency at the federal or state level to champion PPPs (EIU 2019:39; Prats 2019:11). However, the Law of PPPs grants the Ministry of Finance the right to provide direction from an administrative law perspective (EIU 2019:39). Even though there is no dedicated agency supporting PPPs, the Mexican federal government in 2008 established the National Infrastructure Fund Trust (FONADIN) to coordinate federal investments in infrastructure. The FONADIN assists in the “planning, promotion, construction, conservation, operation and transfer of infrastructure projects with social impact or economic profitability” (World Bank Group 2017:5).

The FONADIN’s main responsibilities include the following (FONADIN 2020):

- supports the development of the National Infrastructure Programme;
- facilitates the mobilisation of private sector investment for infrastructure projects;
- promotes the participation of multiple stakeholders in infrastructure development (public, private and social sectors);
- takes risks avoided by the market to achieve social objectives;
- develops bankable projects to achieve social equity even though some projects have low economic profitability; and
- acts as a financier and offers long-term financing under competitive conditions.

Among the portfolios administered by the FONADIN is the PROMAGUA (Water Operators Modernisation Programme), which aims to attract the private sector into water and sewerage management projects. The PROMAGUA initiative has attracted PPP investments to Mexico since its creation (World Bank Group 2017:5).

In addition to the FONADIN, Mexico is also reliant on the National Public Works and Services Bank (BANOBRAS), a specialist development bank financing infrastructure (World Bank, 2017:5). Infrastructure investment is the key focus for the BANOBRAS to ensure productivity across all regions of Mexico. Its primary role is providing financial solutions to boost infrastructure investment, especially for public services, and to promote financial support and strengthen institutional support to government entities and municipalities. The BANOBRAS assumes these functions through a number of programmes such as the following (BANOBRAS 2020):

- FAIS - supports the development of social infrastructure in highly marginalised areas. Projects supported include drinking water and sanitation; drainage and latrines; rural and poor neighbourhood electrification; basic educational infrastructure and the health sector; urbanisation and paving, among others.
- Simple credit - supports public-productive works and projects beyond social infrastructure under the FAIS programme. Projects eligible include infrastructure for drinking water and sanitation, roads and energy, among others.
- Restructuring and refinancing - supports any restructuring and refinancing schemes to improve the financial position of the municipalities' debt arising from investment in key infrastructure sectors.
- Technical Assistance – supports the states, municipalities, municipal entities and parastatals to strengthen their finances and improve their management capacity. Financial and technical resources are directed towards recurring problems of municipalities and their entities.
- Project Financing - supports the financing of public service infrastructure through granting guarantees for projects developed as PPPs or funded from own revenue sources. PPPs supported are from all spheres of government (federal, states or local) with many variations such as concessions and service contracts, among others.



Thus it could be deduced that, while Mexico does not have a dedicated PPP unit at federal and state level government, there are institutions playing a role in supporting and financing PPPs. A much more deliberate focus of centralising PPP activities may still be required.

### **3.5.6 Experiences of water PPPs in Mexico**

Mexico's most prominent PPP in the water sector was implemented in Mexico City in the 1990s. The PPP was restricted to installing water meters, meter reading, developing a customer billing system and implementing credit control measures (Rosales 2014:13). Under this PPP, Mexico City controlled all activities related to infrastructure, assets, financial control, operations and maintenance of water infrastructure, whilst the private sector consortium managed broadly credit control functions (Rosales 2014:13). However, this initiative was not successful in providing opportunities for public private collaborations as it resulted in outright separation of the functions between the private sector and Mexico City (Hearne 2004:9).

The change in political leadership in Mexico City between 2000 and 2006 led to the reversal of PPP initiatives as the new mayor advocated for more pronounced government control of public services (Hearne 2004:9).

In summary, Mexico's experience with PPPs started with a number of unsuccessful attempts which provided some key lessons for the future. The initial PPP projects ended up being taken over by government. This marked the journey of reforming the PPP framework and changing policies to respond to past and emerging challenges. A comprehensive legal framework to support PPPs was put in place including the Law of PPPs and the associated regulations. The Law of PPPs allows states and municipalities to develop their own PPP frameworks and set up units to promote the use of PPPs in financing infrastructure. Decentralisation of the process encourages the private sector to be involved in states or municipalities of their choice based on the applicable PPP framework.

Reforms in the water sector were also driven by Mexico's aspiration to adopt a market-based approach to service delivery and the pursuit for decentralisation of service provision from federal government to states and municipalities. The reforms continued in 1989 with the creation of the National Water Commission (CONAGUA

or CNA). The CNA recommended the creation of an autonomous regulator for the water sector which permitted water entities to institute strict credit control for non-payment of water services. This action paved the way to create some certainty for the private sector investors.

Mexico does not have a dedicated agency at the federal or state level to champion PPPs, but the Law of PPPs grants the Ministry of Finance policy powers. The Mexican government established the National Infrastructure Fund Trust (FONADIN) to coordinate federal investments in infrastructure, a role similar to a PPP unit.

## **3.6 Brazil**

### **3.6.1 Background**

The Federative Republic of Brazil (hereafter referred to as Brazil) commands the largest population in South America with an estimated 211.7 million people (CIA 2020). The federal Constitution of 1988 (hereafter referred to as the 1988 Constitution) created separate legislative and administrative arms which resulted in power being shared among the federal government, states and municipal governments (Sampaio & Sampaio 2020:2). The Constitution created a strong and complex federal system with legislative powers to determine most policy issues. The cooperative government model also confers powers to the 26 states, one federal district (Brasilia), the federal government and 5 570 municipalities. Each municipality has on average about 35 000 residents and on average 214 municipalities form one state (Ribeiro & Fabre 2019:5; Sampaio & Sampaio 2020:2).

Similar to South Africa, powers are assigned to the federal government (national government), states (provinces) and municipal governments. The federal government is responsible for policy development, issuing directives and guidelines to be followed by states and municipalities (Sampaio & Sampaio 2020:2). Local government in Brazil is autonomous and has the power to enact own laws (guided by the federal Constitution), collect local taxes and levy service charges to residents in its jurisdiction. Local government also receives funds from the respective states and Federal government to support service delivery initiatives and programmes (Ribeiro & Fabre 2019:5).

On the economic front, Brazil is one of the strongest emerging markets and is ranked the seventh largest economy in the world (Marques 2016:464). Comparable to South Africa, Brazil faces huge income inequality with a Gini coefficient of 0.51 in 2014 which increased to 0.53 in 2018. Brazil has moderate levels of unemployment of approximately 11 per cent compared to South Africa (Goes & Karpowicz 2017:4; CIA 2020).

The rapid urbanisation, especially in the major cities of São Paulo and Rio de Janeiro, put pressure on infrastructure including water supply infrastructure (World Bank Group 2016a:26). Access to water in Brazil improved over time with 83.6 per cent coverage in 2018, while high income areas have 100 per cent water access (Sampaio & Sampaio 2020:1). It is therefore apparent that water access in Brazil differs among population groups, regions of the country, and between rural and urban communities (World Bank Group 2017:4). Similar to most developing and emerging economies, Brazil's affluent citizens have access to most basic services compared to the poor. Despite having between 12 to 20 per cent of the world's freshwater reserves, Brazil faces water supply challenges due to infrastructure limitations and a culture of water wastages (World Bank Group 2016b; Victor, Almeida & Wong 2015:7). In addition, Brazil's management of its water resources is inefficient posing a threat to economic opportunities especially for sectors that rely on water for growth (World Bank Group 2016a: 25).

Brazil is in South America and is surrounded by the following countries: Argentina, Bolivia, Colombia, French Guiana, Guyana, Paraguay, Peru, Uruguay and Venezuela as presented in **Figure 3.8**.



**Figure 3.8: Map of Brazil**

Source: CIA World Fact Book 2020.

### **3.6.2 Evolution of PPPs and the legal framework in Brazil**

Brazil faces fiscal constraints caused by a declining tax revenue base, increasing social security costs and social service demands such as education and health. These cumulative pressures resulted in the federal, state and municipal governments being unable to raise sufficient revenue to invest in new infrastructure and maintain existing assets. Funding limitations opened up an opportunity for the government to define how the private sector contributes to the provision of traditional public services (e Neto *et al.* 2019:557).

The genesis of PPPs in Brazil dates back to the 19<sup>th</sup> Century with initial projects in the railway industry. During this period, PPPs were not formalised though the railway projects resembled what are now called PPPs (Arrobas & Enei 2009:21; Grilo, Hardcastle, Akintoye, Silva, Melhado & Edwards [Sa]:7). With the passage of time and learning from pioneering countries, PPPs were later formalised when Brazil adopted its 1988 Constitution. Article 175 of the 1988 Constitution permits “the government to provide public services directly or indirectly through franchise (either

concession or permission)". The franchising arrangement involves delegation of public service provision to the private sector, but asset ownership and regulation of the service remains a government function (Pereira 2014:26).

As prescribed in the 1988 Constitution, Brazil developed a comprehensive PPP framework composed of two main laws: the Concessions Law of 1995 (No. 8987/95) and the PPP Law of 2004 (No. 11079/04) (e Neto *et al.* 2019:557; EIU 2019:29). The Concessions Law allows private companies to build and operate infrastructure assets which will later be owned by government after the lapsing of the contracted period. On the other hand, the PPP Law of 2004 formally establishes the PPPs and enables government to pay fees to the private sector in instances where the project is not financially sustainable or the project is not bankable. The motivation to proceed with projects that are not bankable is to ensure that projects with social benefits are financed as this improves social welfare (Barral & Haas 2007:960; EIU 2019:29).

Prior to the PPP Law of 2004, budget guidelines required adequate financial resources to be in place to fund projects and the duration was capped at 5 years for service contracts. The PPP Law was amended to allow public sector entities and government to incur debt while making provisions to pay for the concession (Pereira 2014:30). The PPP Law is mandatory for the different layers of government and public entities (Barral & Haas 2007:960).

In 2012, Federal Law No. 12766/12 was passed as an amendment to the PPP Law of 2004 to address some shortcomings identified in the 2004 law (e Neto *et al.* 2019:557). The amendment introduced incentives to the private sector by legalising the payment of services by the public sector at the project development phase as opposed to making payments only when the project is completed (e Neto *et al.* 2019:557). The implication for such a change was to lower the risk to the private sector and simultaneously allow the government to shorten the duration of the contract in cases where the development of complex projects may take a considerable amount of time before reaching full implementation.

PPP projects by different levels of government are aligned to the constitutional powers assigned to each level of government. For instance, the federal government is responsible for PPP projects in a number of sectors such as energy and interstate

transport sectors. Equally, the various states and municipal governments are responsible for water, sanitation and localised road projects and would enter into PPPs for the specific services (EIU 2019:29). PPP projects at local government level were capped at “a maximum borrowing limit of 1 percent of their annual net revenue for each fiscal year” and this was later reviewed to 3 per cent (in 2009) and then 5 per cent (in 2012) to accelerate the uptake of PPP projects (Pereira 2014:30).

Taking guidance from the principles outlined in the Federal Laws, the states and municipal governments may exercise their rights to promulgate their respective PPP regulations (e Neto *et al.* 2019:557; Queiroz, Astesiano & Serebrisky 2014:14). Between 2005 and 2014, twenty state capitals passed PPP specific legislation (Radar PPP 2015:30). The PPP law further provides accountability mechanisms in that it requires public consultations to be held for stakeholders to express their views regarding the PPPs. In addition, the evaluation of both the perceived economic and financial performance of each PPP has to be undertaken to determine affordability (Queiroz *et al.* 2014:13).

In 2016, the Brazilian Government launched the Investment Partnerships Programme (IPP) housed in the Secretariat of Government of the Presidency. The IPP was established by statute, Law No. 13334 of 2016, with the primary objective of expanding and speeding up the partnership between public and private sector investors. The IPP sets out a framework for implementation of the priority PPP projects, and since its launch the quality of PPPs has improved (EIU 2019:29; e Neto *et al.* 2019:558). To facilitate the work of the IPP, two structures were added, the IPP Council and the IPP Secretariat. The Council makes recommendations on projects that will form part of the IPP whilst the Secretariat coordinates the work of the IPP. The Secretariat is linked to agencies and ministries in the economic cluster (IPP 2020; EIU 2019:29).

Private sector participation started in the 1990s as outright privatisation in the energy, telecommunication and rail sectors, and later transitioned to PPPs in roads, airports and social infrastructure such as hospitals and schools (Camacho, Rodrigues & Vieira 2018:562).

The reforms undertaken over this period contributed to Brazil’s development of infrastructure projects through PPPs.

### **3.6.3 Institutional set-up and reforms supporting water PPPs in Brazil**

Brazil has undergone reforms in the water sector launching new water policies and establishing new institutions at federal, state and local government to improve efficiency in the sector. Many of the reforms were driven by legislative change and also the need to embrace a more participatory governance system (Victor *et al.* 2015:8). Regulation of water in Brazil can be traced back to the 1900s with three reform phases. The first phase was in 1916 where private ownership of water was permitted with some rivers designated as public property for the community to share. The second phase involved water largely used to generate electricity to cater for the growing industrial sector. The third phase is the environment phase where water is treated as a scarce resource and should be managed for the public good (Victor *et al.* 2015:8).

Article 23 of the 1988 Constitution of the Federative Republic of Brazil states that “federal, state and municipal governments have concurrent executive powers to protect the environment and water resources.” Municipalities are assigned exclusive powers to provide services within a defined local area (Sampaio & Sampaio 2020:3). The 1988 Constitution empowers states to manage their own water resources and many states took advantage and enacted own laws. In 1991, São Paulo was among the first to enact water related laws followed by 11 states between 1991 and 1997. The National Water Law (No. 9433 of 1997) came into force in 1997, introducing the National Water Resources Policy (NWRP) and the National Water Resources Management System to manage and implement the new policy direction (Victor *et al.* 2015:11). The National Water Resources Policy (NWRP) seeks to achieve the following objectives: sustainability, integrated management and safety. Some of the underlying principles guiding the implementation of the NWRP include the following (Porto & Kelman 2000:4):

- water as a public good should meet public interest objectives;
- water has economic value given that it is a scarce resource;
- water provision for human consumption needs to be prioritised; and
- involvement of stakeholders in a decentralised water management environment.



There are several institutions that support the water sector in Brazil. The National Water Agency (ANA) is a federal entity established by Federal Law No. 9084 of 2000. The ANA is responsible for enforcing environmental water policy and the overall implementation of the national water resources strategy (National Policy for Water Resources). The ANA sets and enforces the water policy in Brazil in partnership with the 14 states that have established regulatory (multi-sector) agencies for utilities that also cover water and sanitation (OECD 2009:107). Furthermore, the ANA undertakes the following roles: it grants concessions for water use; provides flood and drought mitigation; and it offers water management and creation of management committees for drainage basin management. The ANA consolidated the institutional reforms in the water sector into a single and coherent entity which reversed the decentralisation process envisioned previously (Victor *et al.* 2015:12; Tucci 2004:6). The National Water Law of 1997 was revised in 2004 (2004 Water Law) and sought to re-establish the decentralisation process by trimming some of the ANA's powers, advocating for water use charges and promoting a participatory management system in most water institutions. The objectives set in the 2004 Water Law were not fully implemented, especially levying of water use fees. Cultural and political reasons contributed to the opposition on full implementation of water use fees (Victor *et al.* 2015:12).

The Brazilian government, since 2007, increased funding into the water and sanitation sector using various funds such as the infrastructure Programme for Growth Acceleration (PAC) and subsidised long-term financing by the Brazilian Development Bank (BNDES), as well as private sector participation (World Bank Group 2017:4). Despite the increase in water infrastructure funding, access to water in Brazil varies between regions in the country, rural versus urban communities and between income levels (World Bank Group 2017:4).

#### **3.6.4 Institutions to support PPPs**

In Brazil, there are several institutions, federal government departments and joint committees set up to support private sector participation in government projects. The Ministry of Finance and the National Treasury Secretariat are responsible for evaluation of proposed PPP projects to establish affordability and to determine

whether the repayment levels fall within the prescribed caps set by the Fiscal Responsibility Law (Queiroz *et al.* 2014:13; Queiroz & Motta 2012:1230).

The Brazilian government through Law No. 13,334 of 2016 launched the Investment Partnerships Programme (IPP) creating the IPP Council and the IPP Secretariat. The IPP is administered by the Presidency and sets out a framework for implementation of the priority PPP projects (EIU 2019:29). Since its launch, the quantity and quality of PPPs improved both in terms of documentation and implementation (Prats 2019:14; EIU 2019:29; e Neto *et al.* 2019:558). The objectives of the IPP are the following (IPP 2020):

- broaden investment opportunities in line with the country's development goals;
- improve and expand the quality of the public infrastructure and ensure that cost-recovery tariffs are levied to the users;
- encourage fair competition in the selection of private partners;
- safeguard legal commitments by ensuring security of contractual arrangement; and
- support the regulatory functions of the state and reinforce the autonomy of state regulators.

In addition to IPP, a joint PPP Steering Committee (also known as the Federal PPP Management Committee) comprising representatives from the Ministry of Finance, the Ministry of Planning and Budget and the Presidency was established in 2005 by Presidential decree (No. 5385/05), to coordinate approval of PPP projects in Brazil (Prats 2019:14; Queiroz *et al.* 2014:15; Queiroz & Motta 2012:1230; Arrobas & Enei 2009:21). The Presidential decree was later modified in 2007 (by decree No. 6037/07) and expanded the scope of the management committee to include the following (Queiroz *et al.*, 2014:15; Queiroz & Motta, 2012:1230-31; Arrobas & Enei, 2009:33):

- delineate the priority services to be delivered via PPPs;
- sanction the commencement of the bidding process;
- define the standard used for evaluating projects and timing of a contract;

- determine procedures for awarding contracts;
- approve the PPP projects and the contracts;
- create standardised documents for bidding and sample PPP contracts to guide the contracting phase; and
- sanction the use of government resources to guarantee government's financial obligations under the PPP agreement.

In order to support and develop PPPs in their respective jurisdictions, several states in Brazil have established PPP units. However, even though several states have established PPP units, limited skills result in functional dependency on federal government departments (such as of the Finance and Planning Departments). Skills required by the PPP units include legal, financial and technical skills to facilitate rigorous analysis of the proposed PPP projects (e Neto *et al.* 2019:558).

In addition to the defined institutions that support PPPs in Brazil, multilateral and regional institutions play an ad hoc role in Brazil. For instance, the Inter-American Development Bank supports Brazil's PPP Programme, through a number of initiatives, notably, the institutional support to the National PPP Programme. The programme targets three areas namely, (i) consolidation and strengthening of the PPP steering committee, which provides support to other sector ministries and various states; (ii) regulation and formalisation of the PPP methodology; and (iii) support for the design and execution of selected PPP pilot projects (Queiroz *et al.* 2014:19-20).

From a funding perspective, the Brazilian Development Bank (BNDES) is a key lender for PPP infrastructure projects in Brazil. The role of the BNDES is envisaged to be reduced in order to diversify the capital markets and allow private investors to play a significant role (EIU 2019:29). The BNDES acts as an executing agency responsible for preparation of financial documents, project research and uses its balance sheet to attract additional funding (Queiroz *et al.* 2014:21). The involvement of the BNDES in infrastructure financing can be traced back to the early 1990s where it managed the initial privatisation processes. Its role has since changed to managing PPP concessions structured by the Estruturadora Brasileira de Projetos (EBP). The EBP is a joint venture between the BNDES and eight commercial banks

in Brazil and its role is to develop federal, states and municipalities' infrastructure projects for PPP funding (Camacho *et al.* 2018:562).

As part of the audit process, the Government Auditor General checks whether procedures were followed during the bidding and awarding of PPP projects. Furthermore, the adherence to the implementation plan for ongoing projects is also undertaken based on the agreed roll-out plan (Queiroz *et al.* 2014:16).

### **3.6.5 Competition in the tender or bidding market**

As previously discussed, NPM champions the promotion of competition and in the case of PPPs, the avenue for creating competition is in the bidding process where private sector investors compete to provide public services.

Federal Law No. 8.666 of 1993 prescribes general rules on procurement and administrative contracts, that is, directs how bidding will be conducted. Public entities are required to provide a motivation as to why PPP should be considered as a viable funding option, in other words, a business case for PPPs is mandatory. Other factors to be included in the document are value-for-money considerations, options evaluation, and cost-benefit analysis (Pereira 2014:35). A summary of the steps followed in PPP projects is presented below (Radar PPP 2015:15):

- a) Intention – initiation by public officials or unsolicited proposals.
- b) Project modelling – specialised team put together to develop feasibility studies.
- c) Public consultation - submission of bid's notice and contract drafts for public consultation with a 30-day period to receive comments.
- d) Request for proposal.
- e) Bidding – competition model is defined including pre-qualifying criteria.
- f) Preparation for contract signing.
- g) Contract signature and implementation.

Despite the clarity provided in the procurement laws, Brazil has put restrictions on the participation of private investors from foreign countries in PPPs (Marques 2016:464). Accordingly, Brazil has not fully embraced the benefits that accrue from opening up tenders for PPP to foreign companies. Restricting tenders to only

Brazilian companies limit innovation and use of alternative technology. These restrictions limit the extent of competition and may increase costs to government arising from poor competition outcomes (Marques 2016:464). Robust competition eliminates excessive profits and mitigates the temptation of collusive behaviour among companies (Marques 2017:141). Collusive tendering is much more likely if the tender process is only limited to local companies who may have some history with one another. Foreign companies may have a somewhat disruptive effect which aids the competitive process and provides greater value for money for government.

Bidding markets are characterised by competition for the market as opposed to competition in the market. In other words, once a tender is issued after the bidding process, no competition is possible thereafter. Government is therefore required to put in measures to protect customers in such instances and an independent economic regulator could be a possibility. In most Latin American countries, the water sector is subject to a sector-wide regulator (for example federal water commission, water law) and an economic regulator (for example national regulatory agency or several sub-national entities). Monopoly private sector water services operators are monitored so as not to abuse their market power. In Brazil, the regulation of services is delegated to the state/provincial or municipal level but limited capacity (administrative, technical and financial) reduces its effectiveness (OECD 2009:106). The regulatory regime is compromised due to political meddling which results in states having weak and ineffective regulatory practices (OECD 2009:107).

In conclusion, Brazil has procurement laws to guide competition for PPP projects, however, the restrictions on foreign bidders may result in sub-optimal competitive outcomes which may be detrimental to service delivery in the long run. In order to protect local companies, Brazil may set maximum foreign shareholding in consortiums involving local companies to protect the competitive process.

### **3.6.6 Experiences of water PPPs in Brazil**

Prior to the 1960s, water provision in Brazil was considered to be deficient and of poor quality as a result of inefficient operations and ineffective water regulations. Furthermore, each water authority had a different business and water management

model with some municipalities forming consortia to service areas under their joint jurisdiction, while others provided services independently. The water value chain was clearly fragmented with several business models at play with no standardised norms and procedures (De Oliveira 2008:1). In 1964, the military government prioritised water and sanitation and created the National Housing Bank (BNH) whose objective was to drive urban development including financing for water and sanitation infrastructure. This marked the beginning of some limited formalisation in the water value chain with most municipalities providing water services directly and others using a mixed-ownership model (De Oliveira 2008:1).

The game changer in the Brazilian water sector was the establishment in 1971 of the National Sanitation Plan (PLANASA). The PLANASA set out the investment requirements for the water sector and developed water sector policies and guidelines for tariff determination (De Oliveira, 2008:1). In addition, the plan championed the formation of state water and sanitation companies (CESBs) and persuaded municipalities to enter into long-term concessions with some private companies. The result was improvement in water coverage in urban areas rising from 60 per cent in 1970 to 86 per cent in 1990 (De Oliveira, 2008:1). Services offered under the PLANASA started to deteriorate in the late 1980s with the Brazilian economy facing hyperinflation and dwindling investments (De Oliveira 2008:1).

The PLANASA system was later abolished with the enactment of the Constitution favouring decentralisation of water provision. PPPs were formalised when Brazil adopted its Constitution in 1988. Despite the formalisation in the Constitution, PPPs in the Brazilian water sector initially experienced a slow start during the “experimentation phase” with approximately 2 per cent of water companies operated by private providers (De Oliveira 2008:1). However, the private operators (representing 2 per cent) supplied water to 25 per cent of the Brazilian population. The National Housing Bank (BNH) which was put in place to support the water sector ceased operations in 1996 due to political meddling and escalating debts. Consequently, this had a detrimental effect on the water and sanitation sector in Brazil as government faced financial challenges to recapitalise these institutions (De Oliveira 2008:1).

After the abolishment of the PLANASA, no coherent policies for the water sector were developed. Taking guidance from the Federal Laws, the state and municipal governments developed their own PPP regulations to promote and revive private sector investment. However, the state and municipal governments face challenges in implementation as they have invested little in training and lack technical skills (e Neto *et al.* 2019:557). The lack of capacity is evident on two fronts in respect of PPP infrastructure development, “(i) improving the quality of PPP projects with proper risk allocation methodology between public and private partners; and (ii) addressing intergovernmental co-ordination problems between the different agencies in the PPP approval process” (EIU 2019:29).

In summary, PPPs in the water sector in Brazil achieved growth when the sector developed a comprehensive PPP framework composed of two main Federal laws: the Concessions Law and the PPP Law. The principles outlined in the Federal Laws were used by states and municipal governments to promulgate their respective PPP regulations as a way of promoting the use of PPPs.

Significant water sector reforms were undertaken and new institutions established at federal, state and local government levels to improve efficiency in the water sector. Many of the reforms were driven by legislative change and the introduction of a more participatory governance system where citizens have a say in most of the water management committees. Several institutions and joint management committees were established to support private sector participation in infrastructure development. These institutions support each activity across the project life cycle of PPP projects including a specialist development bank providing funding for both economic and social infrastructure.

Competition at the bidding stage is crucial in the determination of value for money from PPPs. Brazil has restrictions on the potential involvement of private investors from abroad to participate in PPPs and this denies Brazil an opportunity to benefit from overseas competition, limits innovation, and the use of modern technology is stalled. While the rationale for preferring local private companies may be justified on local empowerment grounds, several alternatives may be explored such as allowing local consortiums to have majority shareholding in joint ventures.



### 3.7 United Kingdom (England and Wales)

#### 3.7.1 Background

The United Kingdom of Great Britain and Northern Ireland (hereafter referred to as the UK) is situated in Western Europe and is composed of England, Scotland, Northern Ireland and Wales as depicted in **Figure 3.9**. The UK has 65.7 million people concentrated in London, Manchester, Liverpool, Edinburgh, Glasgow, Cardiff and Belfast (CIA 2020). Urban areas in the UK account for over 83 per cent of the population with complete coverage of water supply and 99 per cent coverage for sanitation services (CIA 2020). For the purposes of this study, England and Wales' experience will be reflected upon to represent experiences in the UK. Scotland and Northern Ireland have different experiences regarding the water sector.



**Figure 3.9: Map of the United Kingdom**

Source: CIA World Fact Book 2020.

#### 3.7.2 Evolution of PPPs and the legal framework in the UK

Common law regime forms the core of UK's legal system with greater reliance on case precedents. The existing legislation and case law plays an important role in all commercial transactions including how PPP projects are structured. Case

precedents guide the interpretation of facts when disputes arise, and this forms the basis for legal certainty which is one of the pillars for investor confidence in any country. The European PPP Expertise Centre (EPEC) notes that England has not developed a specific PPP law, on the basis that the existing legal framework is flexible to recognise PPPs and provide clarity when disputes arise (EPEC 2012:23). PPPs are catered for under public procurement laws with a number of regulations issued to guide the procurement process. The regulations and directives include Public Contracts Regulations (SI 2006/5), the European Commission's Public Sector Directive (2004/18/EC), and the European Commission's Utilities Directive (2004/17/EC). The directive on utilities is directed to the following sectors: "water, energy, transport and postal services" (EPEC 2012:24).

PPPs in the UK have a long history dating back a few centuries. The UK is considered as a mature and healthy market for PPPs as it was among the first countries to adopt PPPs (Wang *et al.* 2020:1). Joint public private projects existed for centuries in various forms, but the UK represents the modern form of PPPs which emerged strongly in the 1990s (Valila 2020:2). The HM Treasury (Ministry of Finance in other countries) defines Private Finance Initiative (PFI) projects as "PPPs where the private sector raises the required capital to construct the asset" (HM Treasury 2012:15). The National Audit Office (NAO) considers the PFI as a form of PPPs (NAO 2018:3). For the purposes of this study, the PFI is treated as synonymous with PPPs for simplicity.

In the late 1980s, the constrained fiscal position led government to consider using private capital to finance infrastructure projects. Various initiatives were considered leading to the launch of the Private Finance Panel in the early 1990s whose role was to boost involvement of private capital in government infrastructure, develop innovative ideas, and explore new avenues and sectors that would benefit from private capital and seek mechanisms to unblock any potential problems that may be encountered (EPEC 2012:7). The background work led to the introduction of the PFI in the UK by the Conservative Government under Prime Minister John Major in 1992 as a new public procurement system (Willems & Van Dooren 2016:210).

Several benefits were advanced to galvanise support for the PFI. The public sector was predicted to benefit from superior management capabilities of the private sector,

and in the process derive value for money for citizens by efficiently delivering public sector projects on time, on budget, achieving high quality and having well maintained assets through the asset life cycle (Willems & Van Dooren, 2016:210; Boardman, *et al.* 2015:441). From a fiscal perspective, the PFI ensured that government borrowing levels remain constant as PFI/PPP projects are considered to be an off-balance sheet financing mechanism (NAO 2018:7; HM Treasury 2012:15).

After getting the support, the PFI initially commenced with concession agreements for infrastructure for the provision of public services (Wang *et al.* 2020:1; Dong *et al.* 2016:215). The PFI experienced slow take-off and did not reach the capital value milestones set for projects implemented. Government's insistence on having all capital projects evaluated, irrespective of project value, discouraged investors. The Bates Review, following the Labour government's coming to power in 1997, led to the removal of the stringent requirement for all projects to be considered under the PFI, in other words, the process was simplified (Ball & King 2006:37). Since the late 1990s, PPPs in the UK experienced growth and their popularity soared across the world using the UK as a benchmark (Dong *et al.* 2016:215; HM Treasury 2012:15).

In 1997, the governance system in the UK after the elections resulted in some changes, especially on devolution of functions. The devolution policy by the UK government led to some level of autonomy granted to Scotland, Wales and Northern Ireland, even though HM Treasury remained in charge of finance, procurement policy and economic policy (EPEC 2012:5). This devolution resulted in variations in how PPPs are undertaken within the UK with England and Wales following a similar policy framework. As indicated earlier, the study will focus on England and Wales.

Between 2000 and 2009, a number of initiatives were put in place to promote PPPs. Some of these include the launch of Partnerships UK, establishing a PPP projects database, an operational taskforce put in place to support public sector clients, and infrastructure procurement guidelines. Detailed discussion of these initiatives is provided in Section 3.7.4.

The popularity of PPPs in the UK did not come without controversy given the differences in political ideology of the main political parties (Willems & Van Dooren 2016:210). To minimise the controversy filtering through to the bureaucracy, HM Treasury set up the Infrastructure Finance Unit (TIFU) in 2009. TIFU's objective was

to keep the momentum on PPPs and TIFU was later transformed to Infrastructure UK (IUK). In the context of PPPs, IUK is responsible for PPP policy development and advising the relevant ministers (EPEC 2012:14).

Over time, government reviewed its PPP strategies transitioning from the PFI to Private Finance 2 (PF2). PF2 was introduced in December 2012 to address weaknesses identified with the PFI and also to strengthen partnerships between the public and private sector (Willems & Van Dooren 2016:212; HM Treasury 2012:27). Some of the concerns that emerged from the PFI implementation pointed to the model being costly, very rigid, a largely opaque model, constant media criticism and uncertainty in the capital markets regarding PFI financing (NAO 2018:35). PF2 was launched to address some of these concerns with the objective of creating a model that achieved fair costs, potential to attract more financiers into the market, creating some flexibility to encourage innovation, speeding-up the procurement process and enhancing transparency (NAO 2018:35). PF2 has been described as “The Big Rebrand” (DLA Piper 2012:1) and similar to the PFI (National Audit Office 2018:4). Under PF2, the private sector’s role is designing, building, financing and maintaining infrastructure assets for 20-30 years. PF2 introduced the following changes (NAO 2018:36-39; HM Treasury 2012:11-15):

- Streamline procurement process to enhance efficiency while maintaining quality and achieving competitiveness. Tendering phase limited to 18 months from an uncapped period under the PFI.
- Strengthen the mandate of Infrastructure UK by increasing commercial expertise.
- Centralised PPP units to achieve economies of scale and efficiencies and standardisation of PF2 contracts.
- Improve transparency in the tendering process, actual provision of the services and publication of the annual report detailing all PPP information. Equity returns for private investors to be published.
- Enhance value for money for the public sector by managing risks (financial, legal) and introducing competition at equity funding level.

The significant developments in PPP evolution are summarised in **Table 3.4**.

**Table 3.4: History of PPPs in England**

Year	Significant Events
1989	Active promotion of PPPs by government.
1990	First PPP-style project reaches financial close.
1992	Private Finance Initiative (PFI) unveiled with toll-road concession being the first project.
1993	Private Finance Panel established.
1995	List of priority projects produced and procurement begins.
1997	New government elected and expanded the use of PFI.
1999	Bates Review of PFI recommending the formation of Partnerships UK (PUK).
2000	Partnerships UK (PUK) launched.
2001	PUK established as a PPP, raising capital from the private sector.
2004	Projects database launched.
2006	Operational Taskforce established to increase support for clients.
2008	Infrastructure procurement: “delivering long-term value” published.
2009	HM Treasury establishes an Infrastructure Finance Unit (TIFU) .
2009	PUK joins with Public Private Partnerships Programme (4Ps) “to create a new joint venture” called Local Partnerships to support local PPPs.
2010	New government elected: continues to manage existing pipeline with promises to reform the PFI system.
2011	Infrastructure UK (IUK) established within HM Treasury to replace PUK.
2011	Review of Private Finance Initiative (PFI) launched in March 2011 and concluded in August 2011.
2012	In December 2012, PF2 was launched to replace PFI.
2012-2018	National Audit Office continually reviewing the PFI framework, evaluating value for money. Recent review done in 2018.

Source: Willems and Van Dooren (2016:211); EPEC (2012:6;11); HM Treasury (2012:15); Van den Hurk *et al.* (2016:12); NAO (2018:35).

The evolution of the PPP framework in the UK was driven in part by the political leadership and the need to finance public infrastructure needs. Several changes were made over time to improve the PPP framework and address emerging challenges observed during implementation.

### **3.7.3 Institutional set-up and reforms supporting water PPPs in the UK**

This section focusses on the reforms specific to the water sector which were instrumental in promoting PPPs. The water sector in the UK was unregulated for many decades until around 1860 when government started to regulate the water sector (Van den Berg 1997:1). At the beginning of the Second World War in 1939, the water infrastructure and water supply utilities were nationalised with only 28 small water utilities remaining in private control. Further reforms in the water sector occurred at the end of the 2<sup>nd</sup> World War, with government promoting private capital in the water supply sector. By 1989, England and Wales were comprised of 10 public owned entities and 29 privately owned water companies (NEDLAC 2007:49; Van den Berg 1997:1). Privatisation of the water sector started in 1989 and water delivery in England and Wales is now through vertically integrated water providers, that is, water providers are undertaking various activities throughout the value chain such as water abstraction, purification and transmission to households. Government promoted privatisation to improve efficiency in the water sector and get additional funding (Bayliss 2016:5).

Political ideology influences water governance and the associated reforms. For instance, PPPs were spearheaded by the Conservative Party when they were in power between 1979 and 1997 (Walker 2014:400). The major policies pursued by the Conservative government were market-based and neo-liberal in nature. These policies had to be reconfigured in late 1997 with the ascendancy to power by the Labour Party (Walker 2014:400). The Labour government tweaked the water governance framework maintaining the market-based system, but introduced a regulation to mitigate market failure. This policy mix was considered as the “third way” as it brought in the remnants of the Conservative government and the old Labour policies. The period after 2010 resulted in further changes due to a coalition government but maintained the balance between government regulation and market-oriented principles (Walker 2014:400). **Table 3.5** summarises the governance changes triggered by political changes:



**Table 3.5: Political change and effects on water governance**

Time period	1974-1979	1979-1997	1997-2010	2010-present
Leading political party	Labour	Conservative	New Labour	1. Conservative-Liberal Democrats coalition 2. Conservative (2015 to present – 2020)
Meta-governance Principles	Keynesian state coordination	Neo-liberalism	Third Way	Libertarian paternalism
Water meta-governance principles	Closed-network technocratic planning	'Laissez faire' market environmentalism	Market-simulating re-regulation	Market-enabling re-regulation
Governance failure diagnosis	Technical failure	State failure	Market failure	Institutional failure

Source: Adapted from Walker (2014:400).

Privatisation involved the transferring of assets and liabilities of water authorities to newly established holding companies. The holding companies were subsequently granted a 25-year operating licence to be water providers with no exclusive water rights like other legalised monopolies. The operating licences may be terminated with a ten-year notice period (Schouten & van Dijk 2010:251; Asian Development Bank 2000:14).

The structural reorganisation of water delivery led to community protesting about the privatisation process. The concern was about private sector provision abusing its monopoly position and government responded by introducing price caps. Further pressure led the government to introduce some tax on water companies to compensate for the higher tariffs. This experience suggests that privatisation or PPP arrangements without community participation may be counterproductive (Asian Development Bank 2000:15).

An additional measure that government put in place to address the concerns of higher tariffs was to establish an independent regulator to oversee the water sector. The water sector is largely monopolistic and therefore regulatory mechanisms are



usually put in place to mitigate perverse incentives and potential abuse arising from self-regulated markets (Schouten & van Dijk 2010:248). In this regard, the Water Services Regulation Authority (hereafter referred to as OFWAT) is “the economic regulator of the water sector in England and Wales” and it seeks to provide a balance between preventing abuse of monopoly power by water providers and ensuring proper tariffs to encourage further development of the water sector. OFWAT’s role is outlined in Section 2 of the Water Industry Act of 1991 and also in the Water Act of 2014. Its role includes the following (OFWAT 2020):

- Protect the interests of consumers and where possible through effective competition.
- Ensure water companies carry out their statutory functions.
- Secure the long-term sustainability of the water sector.
- Promote efficiency of water companies.
- Set tariffs to mitigate against undue preference or discrimination.
- Contribute to the achievement of sustainable development.

OFWAT is not involved in regulating tariffs for bulk water supply as this is left to companies to agree on commercial terms. OFWAT intervenes only in instances of tariff disputes between the companies where it will prescribe the appropriate tariff for bulk water (Schouten & van Dijk 2010:248).

### **3.7.4 Institutions to support PPPs**

The key entities supporting PPPs in the UK include the following:

- Infrastructure UK (IUK);
- Local Partnerships - equally owned by HM Treasury and the Local Government Association;
- The Local Procurement Authority or Local Private Finance Units; and
- Private Finance Units within respective ministries.

*Infrastructure UK (IUK)* – IUK was established in 2009 and its role is to advise government on prioritisation of infrastructure investment, long-term infrastructure planning, financing and delivery. IUK covers both economic and social infrastructure

such as energy, waste, water, telecommunications and transport. IUK's mandate includes the following (Farquharson & Encinas 2010:7):

- Developing a long-term infrastructure strategy for the UK.
- Mobilising new sources of private sector investment to support public service investment.
- Providing support to major government departments and entities such as HM Treasury.

To execute the aforementioned objectives cited above, the government located IUK within the HM Treasury. IUK has four units responsible for “PPP policy, assurance services, infrastructure delivery and infrastructure financing” (EPEC 2012:14; Rachwalski & Ross 2010:279). The Infrastructure Financing Unit provides credit support for PFI projects to reach financial closure and reignited the PPP market. The infrastructure delivery team supports planning and prioritisation of infrastructure projects across the UK, including projects not financed via PPPs (EPEC 2012:14). From January 2016, IUK was consolidated with the Major Projects Authority to establish Infrastructure and Projects Authority.

*Local Partnerships (LP)* is an equally owned partnership between HM Treasury and the Local Government Association and its role is to provide commercial expertise to local authorities in England (Van den Hurk *et al.* 2016:12). Commercial expertise includes among others, sourcing and commissioning skills, project advisory, transaction or deal support, project management, procurement, contract management and funding skills. Before the incorporation into Local Partnerships, the Local Government Association owned the Public Private Partnerships Programme (4Ps) which provided support to local authorities intending to implement PPPs. In 2009, Local Partnerships formed a joint venture with Partnerships UK to form Local Partnerships (Van den Hurk *et al.* 2016:12; EPEC 2012:20).

*Local Private Finance Units* - major cities and local authorities with substantial PPP activity are granted authority to create Local Private Finance Units (LPFU) to initiate, procure, deliver and operate PPP projects within their local areas. The role of LPFU includes coordinating individual PPP projects within a municipality and disseminating best practice to municipal departments considering PPPs to standardise the

approach to be followed by the municipality. In the case of Leeds Municipality, the LPFU reported to a Chief Operating Officer and was composed of technical, commercial and business management teams. The staff compliment was approximately 70 members supporting PPP projects within the municipality (EPEC 2012:20).

*Line Ministry Private Finance Units* - central government departments, especially larger departments which require significant infrastructure investment, may establish departmental private finance units to initiate, procure and deliver PPP projects (EPEC 2012:19). Examples cited include the Department for Transport where each PFI is owned by the division and supported by an internal corporate finance team composed of 15 members. Its role is to coordinate all activities related to PPPs and develop commercial expertise in the process which is useful for future projects (EPEC 2012:19).

In addition to the established entities, the UK government has flexibility to urgently respond to peculiar circumstances, for instance, during the global financial crisis in 2008/9, the government established the Infrastructure Finance Unit (TIFU) (Willems & Van Dooren 2016:208). TIFU was formed to extend credit to PFI projects on equivalent terms as commercial lenders. This action was motivated by insufficient credit available from the private sector and achieved success by injecting capital and confidence into the market. In some instances, TIFU partnered with commercial banks and the European Investment Bank (Farquharson & Encinas 2010:4). The European Investment Bank (EIB) is one of large lenders to the EU countries and the UK has benefited from funding for PPP projects. In the UK, PFI deals benefited from EIB financing, with lower costs compared to commercial bank lending (Liebe & Howarth 2020:195; NAO 2018:46).

*National Audit Office* - Public accountability of government spending is undertaken by the National Audit Office (NAO) which is independent of government. The NAO is equivalent to the Office of the Auditor General in other countries and reports directly to the House of Commons. Regular ex post reviews are provided by the NAO and the Select Committee on Public Accounts of the House of Commons. This mechanism of accountability ensures transparency in PPP deals (Rachwalski & Ross 2010:279; NAO 2018:40).

### **3.7.5 Competition in the tender or bidding market**

PPP procurement procedures in the UK are standardised to foster transparency and competition. It is a requirement that tender notices be advertised in the UK as well as in the Official Journal of the European Union (OJEU). This is to ensure that tenders comply with EU and national UK laws. In general, PPP procurement resembles the following process (Rachwalski & Ross 2010:278):

- Needs assessment - involves developing a business case or motivation for the project.
- PPP viability: preliminary review of the information for consideration for procurement.
- Feasibility study: important for complex projects as it improves the value for money analysis.
- Procurement strategy: outlines the bidding and selection process and may involve local or central PPP units.
- Construction and commissioning of the project.
- Project monitoring and review: done to measure value for money and mostly conducted by independent agencies such as the National Audit Office.

The 24 private water companies providing services in England and Wales are subject to the Competition and Services Act (CSA) (Schouten & Van Dijk 2010:252). The CSA among others regulates mergers and acquisitions in the water sector. In other words, a water provider may be acquired by another company through commercial negotiations or hostile takeovers. In any scenario, the change of ownership has to be considered by the Office of Water Services (OFWAT) and be subjected to a competitive bidding process (OFWAT 2020). In relation to a court case involving Welsh Water, the court ruled that “a change of ownership or shareholding of an operating water company should go through a competitive bidding process to promote competition” (Schouten & Van Dijk 2010:252-253). Furthermore, the UK Competition Commission sets thresholds for transactions to be notified and outlaws any agreement limiting competition. Agreements between water companies are prohibited if they restrict competition and abuse its dominant position (Schouten & Van Dijk 2010:252-253).

In addition to the requirements set out by the Competition Commission, the Utility Contract Regulations of 1996 further regulate procurement in utility industries which includes the water sector. The Utility Contract Regulations provide a framework for the competitive bidding process and highlight circumstances where exceptions may be made. On account of the Utility Contract Regulations, OFWAT monitors all subcontracting arrangements in cases where the water providers decide to use third parties (Schouten & Van Dijk 2010:252-253). OFWAT is a government agency that is subject to ministerial control and direction, but ultimately answerable to Parliament. OFWAT reports to Parliamentary Select Committees and produces annual reports for consideration by the Secretary of State and the First Minister of Wales (Prasad 2007:20).

The UK was among the pioneers of water sector privatisation in England and Wales. The process to support privatisation was accompanied by various reforms in the water governance system such as setting up an independent economic water regulator (OFWAT) which regulates the water tariffs and water quality. The UK experience indicates that a stable and mature common law doctrine is adequate in providing legal protection to private investors. This is not to downplay the importance of specific PPP Law in other countries, but the maturity and trust in a legal system counteract the effects of lack of PPP laws.

The UK conducted several reviews of its PPP/PFI policies leading to the transition from PFI to PF2, thereby addressing the ineffectiveness observed in the PPP framework. PPPs were never divorced from the political agenda and this provided much scrutiny to PPP through parliamentary oversight. The elevation of PPPs at Select Committee in the House of Commons assisted in getting feedback leading to further refinement of the process. The National Audit Office (NAO) raised concerns about the costs of PFI, complexity and the rigid nature of the contracts which led to some changes in the strategy (Palcic *et al.* 2019:7; NAO 2018:35).

The UK has various support agencies for PPPs decentralised to major government departments and large cities. Decentralisation results in better turn-around time in evaluation of the proposed projects and develops capacity across all levels of government and is not necessarily reliant on central PPP units at central government level.

### 3.8 Conclusion

This chapter explored international experience of PPPs by providing an in-depth analysis of China, Mexico, Brazil and the UK (England and Wales). The exposition of these international experiences is to uncover best practice regulatory frameworks from countries that have implemented a lot of water PPP projects. The objective is then to compare South Africa's PPP framework against the collective experiences of the four countries. The insights into why the PPP frameworks in China, Mexico, Brazil and UK (England and Wales) achieve more PPP projects, what works, and how it works have been outlined which will inform the assessment of South Africa's framework and lessons thereof which will be discussed in **Chapter 4**.

China experienced a remarkable transition from a government controlled water sector to embrace market and private sector driven reforms which allowed private capital to invest in the water sector. The reforms have not been perfect and the legal and regulatory framework still require further attention in a number of areas such as transparency in the procurement process and consistent application of PPP procedures. China's experience shows that, notwithstanding the shortcomings in the legal and regulatory framework, strong political will, frequent reviews to the PPP policies or directives and tariff reforms in the water sector overshadow the weakness and achieve superior results measured by the growth in PPP infrastructure projects.

Mexico's experience with PPPs started with a number of unsuccessful attempts which provided some key lessons for the future. This marked the journey of reforming the PPP framework and changing policies to respond to past and emerging challenges. A comprehensive legal framework to support PPPs was put in place including the Law of PPPs and the associated regulations. States and municipalities were empowered to develop their own PPP frameworks and set up units to promote the use of PPPs in financing infrastructure.

Brazil's water sector PPPs witnessed some growth following the passing of the Concessions Law and the PPP Law which allowed states and municipal governments to promulgate their respective PPP regulations as a way of promoting private investment. Significant reforms in the water sector and creation of new institutions played a significant role in attracting private capital in the sector. These institutions support the various activities of the project life cycle. Competition at the

bidding stage is crucial in the determination of value for money from PPPs. However, Brazil put restrictions on participation of foreign private investors to tender for PPP projects and this denies them an opportunity to benefit from overseas competition, it limits innovation and the use of modern technology is stalled.

The UK pioneered water privatisation in England and Wales by reviewing various water governance systems such as setting up an independent economic water regulator (OFWAT) which regulates the water tariffs and water quality. The UK experience indicates that a stable and mature common law doctrine is adequate in providing legal protection to private investors. The UK decentralised PPP support initiatives to major government departments and large cities to promote PPP execution.

The next chapter focusses on South Africa's PPP framework with the objective of establishing whether the regulatory framework governing municipal PPPs in South Africa compares to international best practice.



## **4. CHAPTER FOUR: INFRASTRUCTURE FINANCING IN LOCAL GOVERNMENT IN SOUTH AFRICA**

### **4.1 Introduction**

Municipalities are water service providers and face several challenges in fulfilling this mandate due to several reasons. Key to this study is the water infrastructure backlogs, limited maintenance and insufficient investment in new water infrastructure. Municipalities cite several reasons for the increasing backlogs, but funding constraints is the key factor. In order to tackle the infrastructure backlogs and invest in new infrastructure, alternative sources of funding are required by municipalities. Options available to municipalities include transfers or grants from national government, long-term borrowing from financial institutions (including issuing bonds), own revenue sources (increasing service tariffs), outsourced water provision and entering into public private partnerships (Financial and Fiscal Commission (FFC) 2019:206).

Local government has legislated mechanisms defining how to fund budgets and under what circumstances municipalities can borrow to fund capital projects, as well as when PPPs may be considered or when to utilise a combination of these options. The safeguards included in the legislative environment are to ensure that municipalities remain financially viable and do not utilise citizens' funds recklessly.

The previous chapter discussed the regulatory and institutional framework for PPPs in the UK, Brazil, Mexico and China. The selection of these countries was based on their tremendous progress and success in the implementation of water infrastructure PPPs. This chapter's focus is on South Africa's PPP framework with the objective of establishing whether the regulatory framework governing municipal PPPs in South Africa compares to international best practice. An in-depth analysis of the municipal PPP regulatory framework in South Africa is conducted with the intention of benchmarking it to international best practice. Ultimately, this chapter seeks to identify the gaps in the regulatory set-up for PPPs and proposes a new framework which mirrors best practice.

Before discussing the regulatory environment for PPPs in South Africa, the chapter commences by briefly introducing South Africa and its historical context and then outlines the structure of the local government system in South Africa. The discussion

of the legislative framework for local government follows, including the funding options available for infrastructure development in South Africa. In undertaking such an analysis, the institutional framework of local government finances is discussed.

## **4.2 Overview of South Africa and its government system**

### **4.2.1 South Africa: a contextual background**

South Africa forms part of the Southern Africa Development Community (SADC) as it is situated on the southern part of the African continent. South Africa has a land surface area of 1 219 602km<sup>2</sup> and its neighbouring countries are Namibia, Botswana, Zimbabwe, Lesotho, Mozambique and Swaziland (Tibane 2016:2).

The population of South Africa is estimated to be 59.62 million based on the 2020 mid-year population estimate, with Gauteng Province accounting for 15.5 million (26 per cent) followed by KwaZulu-Natal with 11.5 million people (19.3 per cent) (StatsSA 2020:viii).

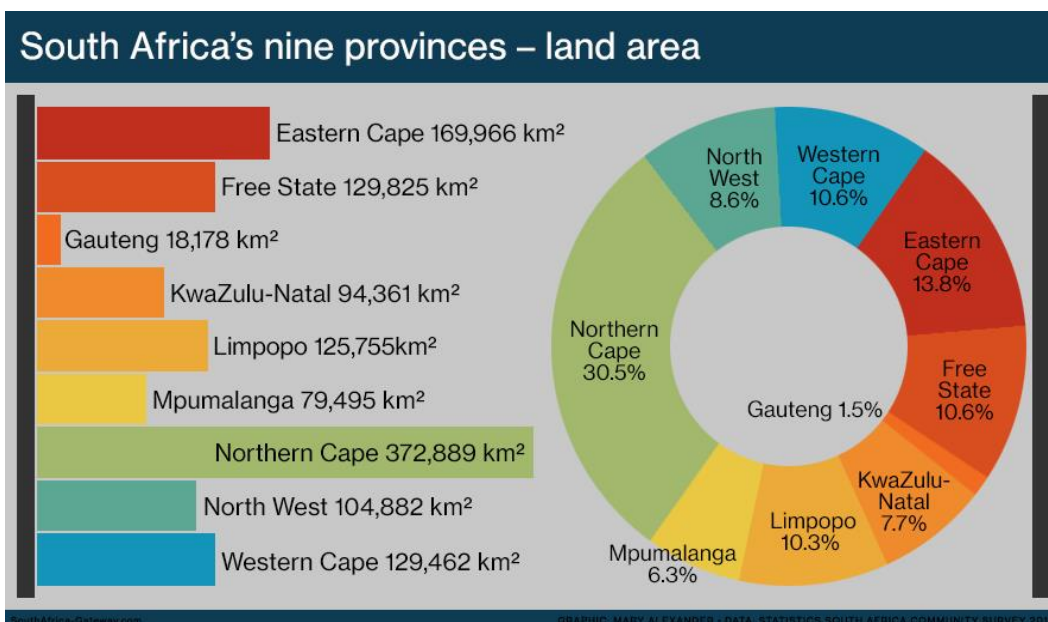
Section 103 of the Constitution of the Republic of South Africa establishes 9 provinces, namely Eastern Cape, Free State, Gauteng, KwaZulu-Natal, Limpopo, Mpumalanga, Northern Cape, North West and Western Cape. Each province has a provincial government headed by a premier. The provinces vary in terms of size and population. **Figure 4.1** depicts the location of the 9 provinces, the provincial capitals and the area represented by each province.



**Figure 4.1: Map of South Africa, its provinces and neighbouring countries**

Source: Maps of the World 2018.

Statistics South Africa (StatsSA) notes that Gauteng Province is the driver of economic activity in South Africa accounting for over 34 per cent of Gross Domestic Product (StatsSA 2017), yet it is the smallest province accounting for 1.5 per cent of the land area size as shown in **Figure 4.2**.



**Figure 4.2: Proportion of land area by province**

Source: StatsSA (2016:11).

#### **4.2.2 Brief history of South Africa**

Similar to many African countries, South Africa has a history of colonisation which started in 1652 when the Dutch East India Company established its base in the Western Cape Province (Cape Town) to utilise the land for agriculture. In 1806, the British reoccupied the Cape, extended the European influence to Durban (KwaZulu-Natal Province) and by the mid-1800s its influence extended further inland to the Transvaal and Free State (Tibane 2016:3). In 1910, the South Africa Act established a Union of South Africa incorporating previous colonies of the Transvaal, Cape, Natal and Free State (Tibane 2016:3; Kuye 2006:292). The creation of the Union of South Africa led to the emergence of Black opposition such as the African National Congress (ANC) which was instituted in 1912, and the South African Communist Party (SACP) created in 1921.

The National Party, which was pro-Afrikaner, rose to power in 1948 and perpetuated the discriminatory legislation against Blacks and this fuelled Black resistance under the banner of a Defiance Campaign in the early 1950s. The Republic of South Africa Constitution Act, 1961 (Act 32 of 1961), known as the second constitution, was adopted and it established a Republic, functioning independent from Britain. The third constitution, Republic of South Africa Constitution Act, 1983 (Act 110 of 1983) introduced a major amendment to the South African legislative and executive system. A “so-called tri-cameral system of government” created different legislative provisions for Whites, Coloureds, Indians and Blacks. The Black population was treated the worst compared to other races (Kuye 2006:292). The third constitution maintained the unitary system of government with provincial government assigned some functions. In addition, the legislature continued to be in Cape Town (Western Cape Province), the national government seat in Pretoria (Gauteng Province) and the seat of the judiciary was retained in Bloemfontein (Free State Province) (Tibane 2016:4-6; Kuye 2006:292).

Defiance campaigns continued in different forms leading to the first democratic elections in 1994. The African National Congress (ANC) was triumphant in the elections achieving 62 per cent of the votes and Nelson Mandela was elected President of South Africa (Tibane 2016:6).

### **4.2.3 Governance structure**

The attainment of democratic rule in South Africa steered a new constitutional order which provided for equality of all citizens. Chapter 2 of the Constitution sets out the “Bill of Rights which lays the foundation of any democracy”. The Bill of Rights covers all facets of human life and these include, among others, “equality before the law, human dignity, right to life, privacy, freedom of expression and right to healthcare, food, water and social security”.

The Constitution provides a legal framework on how government is structured, among others. Section 40 of the Constitution describes the “Government of the Republic as constituted as national, provincial and local spheres of government which are distinctive, inter-dependent and interrelated”. The specific roles of each sphere of government are well articulated in the legislative framework and where disputes arise, they are resolved through an inter-governmental relations framework. Section 41(1) of the Constitution advocates for “mutual trust and good faith by the three spheres of government” by inter alia, the following (Thornhill 2011:46):

- providing support to one another;
- fostering of consultation on matters of mutual interest;
- harmonising their actions;
- setting and settling of procedures; and
- averting litigation against one another.

Schedules 4 and 5 of the Constitution allocate different roles for each sphere of government, with other functions having concurrent competence between the spheres of government. The national government sphere enacts national legislation to guide and provide a legal framework and set boundaries for other spheres of government. An additional responsibility for national government is to support and monitor the implementation of government policies. The ruling political party’s philosophy influences and directs national government policy (Van der Waldt 2013:9).

The provincial government has both legislative and executive authority on matters assigned by the Constitution or delegated by national government within provincial boundaries. Similar to the national sphere, the political party in power in a province dictates provincial government policy through a number of platforms such as the

annual State of the Province Address presented by the respective premiers. However, the discretion of the provincial sphere of government is limited within the national legislative framework as directed by the Constitution (Van der Waldt 2013:9).

Local government interfaces more directly with the citizens on a daily basis, compared to any other spheres of government (Kraai *et al.* 2017:59). In South Africa, local government is represented by local, district and metropolitan municipalities and these institutions deal with matters affecting citizens within their local authority.

National and provincial government have concurrent competence on education, health services, housing, public transport, trade and policing, among others. Equally, provinces and municipalities have concurrent responsibilities in “health (primary health at municipal level), social development, housing, roads and municipal infrastructure services”. The annual Division of Revenue Act (DORA) allocates funding in the form of equitable shares to provinces and municipalities to assist to deliver basic services (National Treasury 2020c:3). Local government has exclusive competence to supply water, sanitation services, electricity reticulation, municipal public works and municipal public transport, among others. Allocation of funds is made to provinces and municipalities and they may have discretion on how to utilise these funds to fulfil citizens’ needs and respond to provincial and local dynamics, while simultaneously achieving national objectives (National Treasury 2020c:3).

Given the government system discussed above, the question that arises is whether South Africa is a federal or unitary state. Thornhill (2011:46) argues that the analysis of the provisions in the Constitution entrenches federalism and features of the unitary state. Furthermore, it is argued that South Africa could neither be categorised as a federal nor a unitary state but is uniquely structured as a cornerstone for a democratic society where citizens are uniformly protected by the law. Malan (2014:54) on the other hand, contends that South Africa is a unitary state founded on constitutional democracy and at the same time exhibits features of federalism. Constitutional democracy dictates that the power and authority of the state should be anchored in the Constitution, in other words, the supremacy of the Constitution is unquestionable and the state is bound by it just like any other citizen.



#### **4.2.4 Arms of the State**

The Constitution establishes “three arms of the state, that is, legislature, executive and the judiciary”. The three arms of the state are described as “truly co-equal and not notionally equal” (The South African Judiciary 2019:6). The Constitution imposes separation of powers between the three branches of the state and creates measures to safeguard independence and accountability to ensure integrity in the system (Kraai *et al.* 2017:62). The system though clearly defined has sufficient flexibility to respond to any challenges that may arise.

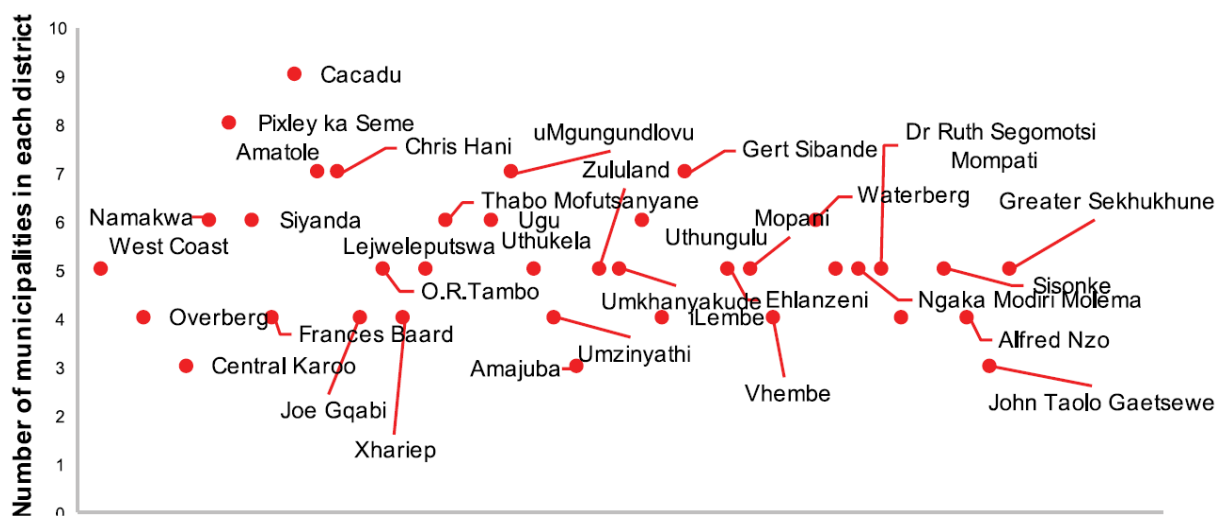
The legislature (Parliament) is responsible for making laws at a national level. Section 44 of the Constitution provides for the parliamentary system made up of two houses, the National Assembly and the National Council of Provinces (NCOP). The National Assembly consists of between 350 to 400 members, while the NCOP has 90 delegates as provided for in Sections 46 and 60 of the Constitution. The NCOP’s role is to represent the interest of provinces at national level by providing input on matters affecting provinces. Both houses of Parliament and their respective committees hold the Executive accountable by monitoring the budget expenditure and the progress on programme implementation (Parliament 2019:9). Parliament on the other hand accounts to the voting public and their term of office is determined through an electoral process (The South African Judiciary 2019:6).

Similarly, provincial governments have provincial legislatures that enact laws applicable to their provincial borders. The legislative authority of the nine provinces is bestowed to the premiers (as the head of the provincial executive) and other provincial executive members (referred to as provincial cabinet members or Members of the Provincial Executive Council (MECs) (Van der Waldt 2013:10). Provincial government departments report to the respective MECs, for example, the Provincial Department of Local Government reports to the MEC for Local Government.

The powers granted to provinces are not independent and national government monitors their performance and intervenes in instances where there is failure to fulfil constitutional responsibilities. National government intervention in provincial matters is guided by Section 100 of the Constitution and this is done to guarantee the unity of the state (Thornhill 2011:46).



At the local government sphere, municipal councils are the legislative bodies responsible for passing by-laws, approvals of municipal budgets, and ensuring delivery of municipal services to their residents, among other functions. The municipal council is composed of ward councillors and proportional representative councillors elected every five years after elections (City of Johannesburg 2020:81). There are 257 municipalities, of which eight are metropolitan, 44 are district municipalities and 205 are local municipalities (Auditor General of South Africa (AGSA) 2020a:3). Section 155 of the Constitution categorises municipalities, for instance, metropolitan municipalities are referred to as Category A and provide a full array of municipal services, while local municipalities are classified as Category B and district municipalities are classified as Category C. There are 44 district municipalities in South Africa and each district municipality is composed of a number of local municipalities. **Figure 4.3** shows the number of municipalities in some of the district municipalities in South Africa. A district municipality may be considered as a “district government” and its role is to develop district-wide integrated planning to promote economic development in the district (Ncube & Vacu 2017:267).



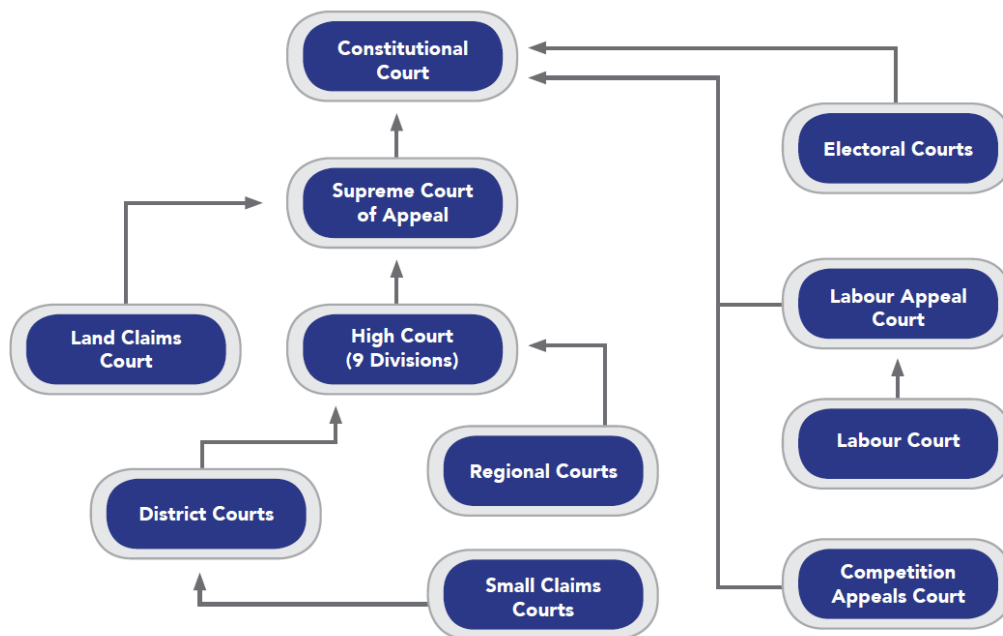
**Figure 4.3: Number of municipalities in each district municipality**

Source: Adapted from Ncube & Vacu (2017:267).

The role of the district municipalities varies based on the capability of the local municipalities. However, broadly, the roles of district municipalities (excluding metropolitan municipalities) are summarised as follows (Ncube & Vacu 2017:259):

- provision of potable water supply, health, sewage disposal and domestic wastewater services;
- resource allocation within their boundaries;
- provision of district-wide services such as district roads, airports, solid waste disposal sites, firefighting services, abattoirs, markets and local tourism;
- planning and coordination of infrastructure delivery and participation in intergovernmental coordination;
- provision of technical support and capacity building to municipalities in their jurisdiction; and
- coordination of intergovernmental relations and links between provincial and local governments.

Chapter 8 of the Constitution establishes the judiciary and Section 165(2) of the Constitution states that the judiciary is “independent and subject only to the Constitution and the law”. The judiciary enjoys functional independence but that does not remove scrutiny on its work and conduct in discharging its functions (The South African Judiciary 2019:6). The judiciary authority is bestowed in the courts and the court system is comprised of the Constitutional Court (the apex court), the Supreme Court of Appeal, the High Courts, the Magistrates’ Court (district and regional courts), and any other courts with similar status to the Magistrate or High Courts as directed by Section 166 of the Constitution. The additional courts include the Land Claims Court, the Small Claims Court, the Electoral Courts, the Labour Appeal Court, the Labour Court and the Competition Appeals Court (The South African Judiciary 2019:10) as shown in **Figure 4.4**.



**Figure 4.4: South African Hierarchical Judiciary Structure**

Source: The South Judiciary 2018/19 Annual Report (2019:10).

Section 85 of the Constitution bestows the President to be the Head of Executive Authority of South Africa. The Executive (including Cabinet members appointed by the President as the Head of the Executive) is accountable to Parliament. Equally, premiers are Heads of Provincial Executive Authority and appoint Members of the Executive Council (MECs) or provincial cabinet members as stipulated in Section 125 of the Constitution. The provincial legislature provides oversight and holds the MECs accountable. Similar to provinces, local government executive authority is vested in municipal councils comprised of elected councillors. A municipal council is led by the Speaker supported by the Chief Whip of Council and the Chairperson of Committees. The Chief Whip manages the relationships with other political parties to drive the agenda of the council (City of Johannesburg 2020:81). Councillors elect a mayor who in turn appoints Members of the Mayoral Committee (MMCs). The White Paper of Local Government, 1998 promoted the delegation of Council powers to the mayor and other Members of the Mayoral Committee. Delegation was envisaged to improve efficiency as the small executive committee in turn hold the team of councillors accountable.

The following section discusses the institutional arrangements in the water sector in South Africa. The purpose is to understand the role-players in the sector, their mandate, and the empowering legislation determining their respective mandates.

### **4.3 Institutional arrangements in the water sector**

South Africa experiences water scarcity and is ranked number 30 on the list of driest countries worldwide with insufficient water to adequately meet water needs for its citizens (GreenCape 2017:14; National Treasury 2011:124). Two-thirds of the country receives annual rainfall below the global average (Maphela & Cloete 2020:536). The Water Research Commission (WRC) contends that the country's water resources are at risk with a water supply deficit estimated to be 1 billion cubic metres by 2035, assuming that no changes to the water demand pattern realise (WRC 2018:8). A combination of factors explain the water deficiency, namely low rainfall, heavy reliance on irrigation (with only 12 per cent of the land receiving adequate rainfall) and use of water in the energy generation process. Environmental factors such as pollution (from mining and industrial production), climatic change, and high levels of evaporation exacerbate water scarcity (Bayliss 2016:5; 16; Maphela & Cloete 2020:536). Despite the droughts experienced in South Africa, the water supply situation remains dire, even in non-drought years where South Africa is ranked number 148 out of 180 countries in terms of water availability per capita (WRC 2018:8). The water sector is subjected to various regulations, legislations, standards, policy and guidelines as discussed below.

#### **4.3.1 Evolution of Water Policy in South Africa**

Water scarcity in the country is now more pronounced given the democratic government's pursuit for water access to the majority of the citizens and dismantling of segregation policies of the colonial era. The transition from colonial regime to democracy in 1994 forced the democratic government to revisit institutional arrangements in the water sector. Revision of repressive laws was a priority of the new government and the water sector was no exception (Bayliss 2016:5; Kapfudzaruwa & Sowman 2009:683). Post-colonial water policies were anchored on addressing water access imbalances, which tied access to water with land ownership as specified in the Water Act, 1956 (Act 54 of 1956) (Kapfudzaruwa & Sowman 2009:683). The Water Act of 1956 was based on discriminatory water access which favoured non-Africans. The policy position at that time was influenced

by riparian rights, founded in the British common-law system, which linked “water rights to land ownership” and this excluded most Blacks as they were not permitted to own land individually in 87 per cent of the country (Maphela & Cloete 2020:536).

To advance the riparian rights system, Bantustans or Bantu homelands were established where land was set aside for Blacks. Water provision in the Bantu homelands was the responsibility of the Homeland governments. Homelands were established in areas such as the Transkei, Ciskei, Venda and Gazankulu. The prevailing socio-economic conditions and peoples’ disregard of the Homelands government due to lack of political legitimacy, promoted a culture for non-payment of water services. The result was further deterioration of water services and other government services which led to services being subsidised (Bayliss 2016:5). The Department of Water and Forestry (DWAFF) estimates that in 1994, almost all of the Indian and White population had access to decent and safe water compared to 95.4 per cent of Coloured people and 43.3 per cent of Blacks. The colonial regime’s strategy resulted in the exclusion of Blacks in accessing decent water (DWAFF 1994:3).

With the attainment of democracy in 1994, the government adopted a number of policies and interventions to reverse the inequalities caused by several generations of oppression. The Conference for a Democratic South Africa (CODESA) guided the Constitutional reform process which led to changes in basic laws and national policies. The result was a very progressive water policy which recognises principles of sustainability of water resources, upholds people’s basic needs and rights while simultaneously trying to address past injustices caused by the apartheid system (Jones & Duncanson 2004:477). Chapter 2 of the Constitution sets out the Bill of Rights as foundational principles of democracy, and it covers many areas such as the citizen’s right to healthcare, food, water and social security, among others.

The Reconstruction and Development Programme (RDP) policy was developed by the African National Congress (ANC) in 1994 and championed an “integrated, coherent socio-economic policy framework to dismantle the discriminatory policies of apartheid”. The RDP identified meeting basic needs such as water as vital to eradicate poverty and promote sustainable economic and social development (Bayliss 2016:10). Based on the policy principles contained in the RDP, the then

Department of Water and Forestry (hereafter referred to as DWAF) developed a Water Supply and Sanitation Policy White Paper (hereafter referred to as the White Paper of 1994). Some of the principles in the White Paper of 1994 include the following (DWAF 1994:11):

- The delivery of basic services is a human right.
- Equitable allocation of available resources across regions.
- Water to be treated as having both social and economic value.
- User-pay principle for services.
- Promotion of environmental integrity in all infrastructure development or provision of services.

The Growth, Employment and Redistribution (GEAR) policy in 1996 succeeded the RDP as the main economic policy of the country. Compared to the RDP, the GEAR brought about more neoliberal policies and accentuated the role of private capital investment in service delivery. GEAR embodied the New Public Management (NPM) principles which elevated the supremacy of the private sector in both management and effectiveness in service delivery. One of the immediate interventions was the reduction of subsidies to local government based on the influence of multilateral lending organisations such as the World Bank and the International Monetary Fund (IMF) (Bayliss 2016:12). In the water sector, intense lobbying from multinational companies providing water service was experienced and supported the development of financial instruments for private sector-led water services delivery. Corporatisation of water utilities in the late 1990s began with a few lease and management contracts entered into with established multinational water companies. For instance, Queenstown Local Municipality (now Lukhanji) entered into a lease contract in 1992, Stutterheim Local Municipality (now Amahlati) also entered into a lease contract in 1993, Fort Beaufort (now Nkonkobe) did so in 1995, and finally Nelspruit Local Municipality (now Mbombela) followed in 1999 (Marin 2009:5).

To respond to the changes in the economic policy, DWAF revised the White Paper of 1994 with the White Paper on Water Policy in 1997 (hereafter referred to as the White Paper of 1997) which re-affirmed the principles in the first White Paper. In addition, the White Paper of 1997 proposed reforms to the water laws to ensure

equity in the allocation of water resources among all race groups in South Africa. The White Paper of 1997 envisioned the provision of water delivery using sophisticated policy tools to achieve sustainable, equitable and efficient water resources management. The White Paper of 1997 was heralded as progressive, forward-thinking and ambitious and ranks highly compared to several countries (MacKay, Rogers & Roux 2003:353).

Pursuant to the White Paper of 1997, another key intervention was the enactment of the Water Services Act, 1997 (Act 108 of 1997) (hereafter to be referred to as WSA) which granted the Minister the power to set norms, standards and tariffs for water services. The WSA “guarantees the right of access to basic water to all citizens” and government made a commitment to provide the necessary funding to municipalities to ensure the delivery of basic water. Sections 9 and 10 of the WSA authorise the Minister to determine the quantity of water to be available to citizens to have a reasonable quality of life. In exercising such power, the Minister gazetted “Regulations Relating to Compulsory National Standard and Measures to Conserve Water” in 2001. These regulations give effect to what municipalities have now termed the Free Basic Water Access Policy. Given that water is a basic right as provided for in the Constitution, every citizen is entitled to a minimum amount of water for survival regardless of ability to pay. Regulation 3 provides for “basic level of water supply, sufficient to promote healthy living, and its quantity is set at 25 litres per person per day or 6 000 litres per household per month” (Jones & Duncanson 2004:477).

The recipients of Free Basic Water are poor households unable to pay municipal bills. Municipalities’ record qualifying poor households in their indigent register linked to the billing databases to ensure that the discount is applied when bills are sent out. To give effect to the ministerial directive, municipalities develop a Free Basic Water Access Policy prescribing the minimum amount of water to which poor households will have access. Municipalities may, however, allocate more than 6 000 litres per household per month if they wish to and can afford it. Municipalities receive funding from national government to subsidise the free basic water provided to citizens.

The roll-out of Free Basic Water experienced some challenges which include the following (DWAF 2007:4):



- Financial resources - for the services to be provided in a sustainable and efficient way. The subsidy mechanism did not fully cater for households in remote rural areas which further entrenched the inequalities in water provision between rural and urban areas.
- Socio-political – the plurality of stakeholders to be engaged and the corresponding communication strategy was marred with complexities given multiple views from citizens, consumers, councillors, local government officials and the involvement of provincial and national government. Delivery of free basic services is frequently stained with political posturing, especially in municipalities that are tightly contested. Furthermore, collection of revenue for water consumed above the allocated free basic water is not easy and periodically results in community protests.
- Institutional challenges and intergovernmental coordination – developing the required organisational capacity to foster close working relationships among several institutions (three spheres of government, civil society and resident associations) with sometimes divergent views is difficult.
- Technical capacity – the determination of an appropriate technical and service level option to facilitate free basic water has not always been clearly defined and agreed to by all relevant stakeholders.
- Policy challenges – inconsistencies in identifying the qualifying households to receive free basic water by different municipalities led to complaints. The Free Basic Water Policy is targeted at poor households (defined as indigent households), but some municipalities decided that all residents should receive the initial 6 000 litres of water per month for free regardless of whether someone can or cannot afford it. Subsidising households who can afford to pay puts unnecessary strain on the fiscal position of the municipality.
- Infrastructure backlogs limited the implementation of the minimum levels of service.

In 2003, DWAF launched the Strategic Framework for Water Services (SFWS) to update the 1994 White Paper and cater for the developments in the water sector. The SFWS made provision for the following key interventions (DWAF 2003:3):

- Redefine the role of DWAF to become the sector leader, supporter and regulator in the water sector as opposed to being an operator.
- Reinforce the mandate of all the players in the water value chain (clarification of the mandate) especially water services authorities (municipalities).
- Set out institutional reforms to guide the provision of water.
- Consolidate the fiscal framework to reflect transfers from national government through different grants.
- Emphasise sustainability, financial viability and efficiency of water service provision.

Despite the progress made by government to provide water to most of the citizens, access to water still remains a challenge in rural areas and in informal settlements. The boundaries created by the apartheid system still exist in the allocation of resources, as evidenced by service delivery being superior in White suburbs and the emerging Black affluent areas (Bayliss 2016:5). Regrettably, water availability is still linked to social status and is based on income levels.

The next section discusses the major actors in the water sector value chain and the enabling legislation.

#### **4.3.2 Department of Water and Sanitation (DWS)**

South Africa's water sector is currently governed by the Water Services Act, 1997 (No.108 of 1997) (hereafter referred to as the WSA) and the National Water Act, 1998 (Act 36 of 1998) (hereafter referred to as the NWA). The Department of Water and Sanitation (DWS) has overall authority for managing water resources in the country. Water resources management includes planning, development, conservation and optimal use and management of water resources. The DWS is the sector leader responsible for sector-specific policies and legislation in the water sector value-chain, as well as acting as a regulator (DWS 2018b:12-15). The NWA and WSA exhibit principles of citizen participation and social justice in water resource management and this is amplified by the creation of "catchment management agencies (CMAs) and water user associations (WUAs)". CMAs and WUAs involve all interested stakeholders to promote decentralisation of water

resource management to the lowest possible level of users (Kapfudzaruwa & Sowman 2009:683; DWS 2018b:12-15).

Section 3(1) of the WSA asserts the “right of access to basic water supply and basic sanitation to all citizens”. Basic water supply at a minimum should be readily available to citizens and of acceptable quality. At the domestic water use level, the DWS’s role is to monitor and regulate water supply activities as required by the Constitution. The DWS formulates national policy guidelines for the distribution of water to domestic users and sets minimum service standards for the entire water value chain. The water value chain describes the vertical segregation of the water production process, and in South Africa, it is stratified by function and assigned to respective public entities. For example, untreated water (raw water) is sourced from surface or groundwater and then distributed by water boards (bulk water suppliers) for treatment by water services providers (municipalities) (Bayliss 2016:4).

The DWS develops bulk water infrastructure through the Trans Caledon Tunnel Authority (TCTA). The TCTA is a government owned entity operating as a special purpose vehicle (SPV) “responsible for the financing and building of large water infrastructure identified by the Water Trading Entity established within DWS” (TCTA 2019:43). The TCTA represents the biggest infrastructure project in South Africa operating the Lesotho Highlands Water Project which supplies water from Lesotho to Gauteng Province. In undertaking its function of water resource infrastructure development, the TCTA gets allocation from the national budget or issue bonds. The TCTA raises financing from the local capital markets, long-term loans from local banks and international development financial institutions (TCTA 2019:43). The TCTA’s organisational structure and governance system mirrors that of private business enterprises, yet reports to the Minister of Human Settlements, Water and Sanitation.

#### **4.3.3 Water boards**

The Water Services Act (WSA) establishes water boards as public entities under Schedule 3B: National Government Business Enterprises of the PFMA. Water boards are regional bulk water providers distributing either untreated or treated water to municipalities for distribution to the final consumers or residents. Water boards

undertake this role for a fee. Section 34(1) of the WSA requires the water boards in executing their functions to consider the following:

- Provide efficient, reliable and sustainable water services while complying with health and environmental legislation and regulations.
- Optimal use of available scarce water resources.
- Financial sustainability and cost recovery while meeting the needs of water services providers and users.
- To be guided by national and provincial policies.
- To promote equity in water provision.

There are currently 13 water boards in South Africa responsible for bulk potable water supply schemes, buying raw water and selling it to municipalities and industries (DWS 2018:9-1). In some instances, a municipality may appoint a water board to provide water reticulation to the final consumers. The 13 water boards vary in size, budget and the extent of the area served. The largest water board in South Africa is Rand Water, followed by Umgeni Water which is based in KwaZulu-Natal. Rand Water supplies water in a few provinces such as “Gauteng, parts of Mpumalanga, Free State and North West” (Rand Water 2019:82). Other water boards are Sedibeng Water, Mhlathuze Water, Amatola, Lepelle Northern Water, Bloem Water and Magalies Water. Rand Water services a smaller geographical area concentrated in Gauteng Province but serves the largest population compared to other water boards in the country.

Water boards are permitted to determine their own tariffs to recover costs, and to cater for maintenance and future infrastructure investments. However, in terms of the cooperative governance framework prescribed in Section 42 of the MFMA, water boards must, “at least 40 days before deciding on the final tariffs, request National Treasury and organised local government (South African Local Government Association) to provide comments on the proposed new tariffs”. National Treasury will then interrogate the motivation for the tariff increase in line with government’s projected inflation and other macro-economic factors.

#### **4.3.4 Water services authorities**

Water services authorities are municipalities (local, district or metropolitan) that are tasked with water distribution to the final consumers within their jurisdictional area. Water provision is cited in Schedule 4 Part B of the Constitution as the function assigned to only authorised municipalities. However, not all 257 municipalities in the country are designated as water services authorities, as functions are allocated between different categories of municipalities. For instance, Category B (local municipalities) and Category C (district municipalities) have distinct powers to minimise coordination failures. In some instances, district municipalities provide water services to the respective local municipalities. Metropolitan municipalities are classified as Category A and are all authorised to provide water services. District municipalities are further divided into two categories (C1 and C2), depending on whether they are authorised to provide water. C1 are district municipalities that are not assigned powers to provide water service functions, while C2 have water service functions. Of the 44 district municipalities in South Africa, 21 are water services authorities (WSAs). None of the district municipalities in Gauteng, the Northern Cape, the Western Cape, Free State and Mpumalanga provinces have been assigned with water functions, while the Eastern Cape, KwaZulu-Natal and North West have a mix of district municipalities with and without water functions. All district municipalities under spend on infrastructure budget, and this is worrying given the water backlogs affecting most parts of the country. The district municipalities with the water functions are guilty of inefficient use of resources and delays in infrastructure investments due to capacity constraints (Ncube & Vacu 2017:261).

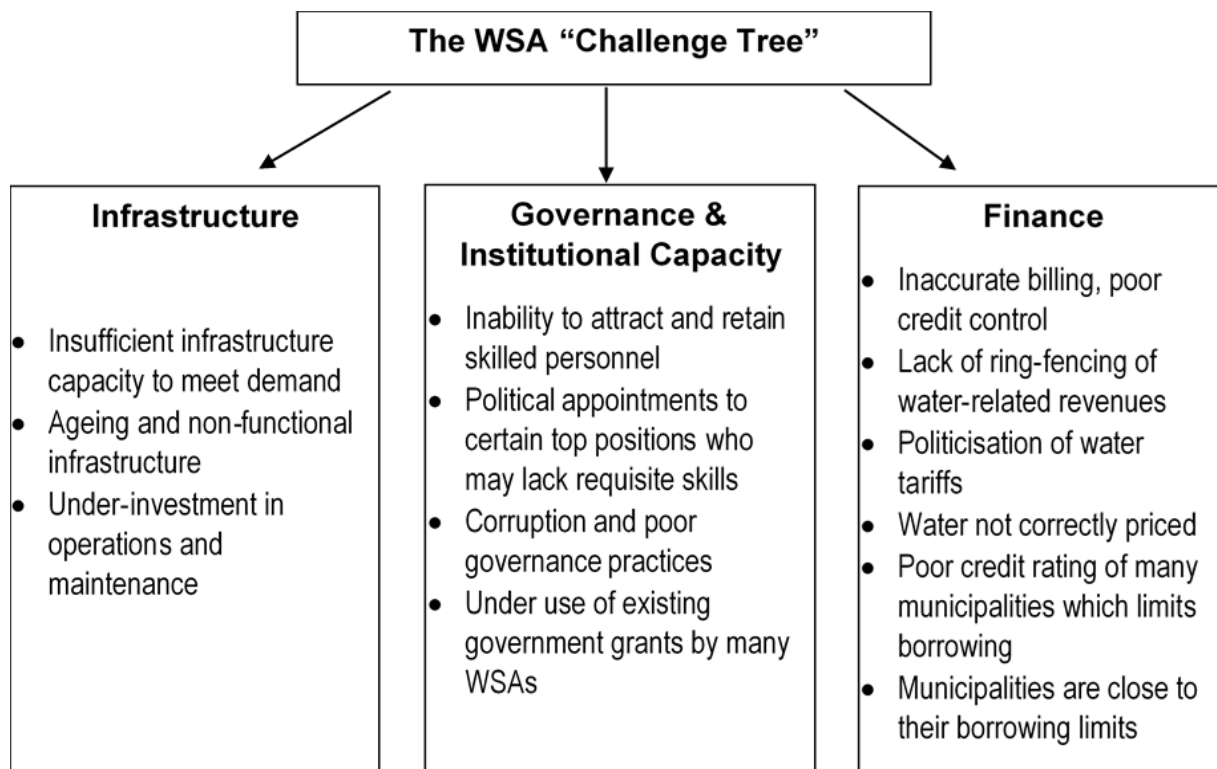
Metropolitan municipalities are classified as Category A and are all authorised to provide water services. There are 144 municipalities designated as WSAs and this accounts for 56 per cent of all municipalities in South Africa. There are several models that WSAs in South Africa utilise to provide water and these include the following (World Bank Group 2011:98):

- The WSA appoints other municipalities as water service providers (WSP).
- The WSA establishes its own wholly owned retail water utility, for example, Johannesburg Water which is an entity of the City of Johannesburg.

- The WSA contracts a municipal owned entity to provide water services in another municipality.
- The WSA contracts a water board to assist with water provision at a fee.
- The WSA contracts a concessionaire, lease agreement or management contract with a private sector entity.
- The WSA utilises community-based organisations to provide water services.

WSAs face several challenges in the delivery of their mandate as at least 33 per cent of these municipalities that are water service authorities are regarded as dysfunctional and more than 50 per cent have limited qualified technical staff to effectively undertake the water services function (DWS 2018a:21). Some of the challenges faced by WSAs are classified in the following three categories (Pettersen 2019:12; National Business Initiative 2019:8):

- Limited investment in infrastructure leading to escalating ageing infrastructure;
- Governance failures and institutional capacity constraints which impede in recruitment of suitably qualified personnel. Governance lapses become the breeding ground of corruption and poor audit outcomes; and
- Constrained municipal finances due to poor tariff setting and billing practices. This subsequently leads to poor credit ratings which constrain the ability of the municipalities to access capital markets for additional funding for capital projects. These challenges are condensed in **Figure 4.5**.



**Figure 4.5: Broad challenges facing WSAs in South Africa**

Source: National Business Initiative (2019:8).

#### **4.3.5 Water services providers (WSP)**

Water services providers (WSPs) are agents that take over the operational responsibility for providing either bulk water services or distributing water to the final consumers (retail delivery). In terms of the WSA, a water services provider is “any entity contracted by a water services authority (municipality) to distribute or sell water to the final consumers on behalf of that municipality” (Smith 2009:4). The WSP could be a municipality distributing water on behalf of another municipality. Equally, water boards may also act as WSPs if contracted by a municipality to distribute water on its behalf. District municipalities may also act as WSPs and distribute water to the local municipalities. Most of the private sector role-players that provide water under the PPPs fall into this category of WSPs as they distribute water on behalf of the WSA (municipality). Of the 44 district municipalities in South Africa, 15 are both WSAs and WSPs (Ncube & Vacu 2017:261).

WSPs are diverse in terms of both scale and type. With regard to scale, a WSP could service a “small rural community, one or more towns, a large metropolitan area



or a whole region” (Smith 2009:4). In terms of type, a WSP may “be a community-based organisation, a local municipality, a district municipality, a public utility (owned by any sphere of government) or a private sector organisation” (Eberhard ([sa]:1). Smith (2009:4) estimates that there are 300 WSPs at a retail level with a significant number being municipalities. The dual role of municipalities being WSA and WSPs at the same time is problematic, leading to the blurring of responsibilities which culminates in governance failure (Smith 2009:4).

The relationship between a WSA and a WSP is governed by a service delivery agreement, for example, between the WSA and another municipality, water board, or private sector entity. However, the service delivery agreements do not always specify outputs or outcomes which limits the level of accountability (World Bank Group 2011:96).

#### **4.3.6 Catchment Management Agency (CMA)**

CMAs are statutory bodies deriving their mandate from Sections 79 and 80 of the National Water Act, 1998 (Act 36 of 1998) (hereafter referred to as the NWA). Section 80 of the NWA highlights that CMAs are responsible for the “management of water resources at a local, regional or surface water catchment level.” The concept of a CMA is based on principles of decentralisation of public decision-making in water resources management. The concept is based on the subsidiarity principle in the Constitution which empowers lower spheres of government to shape their destiny and manage resources within their sphere of influence.

CMAs are entrusted with efficient, effective and economic management of water resources in compliance with national policies and guidelines, while involving local communities (Stuart-Hill & Meissner 2018:27). There are currently nine CMAs in South Africa, each with its own governing board to ensure stakeholder representativity and to mitigate potential self-interest. The nine CMAs are “Limpopo, Olifants, Inkomati-Usuthu, Pongola-Umzimkulu, Vaal, Orange, Mzimvubu-Tsitsikamma, Breede-Gouritz and Berg-Olifants” (Meissner, Funke & Nortje 2016:2). Each CMA has a board of directors to drive its strategy and the board is appointed by the Minister of Human Settlements, Water and Sanitation.

The CMA board may establish catchment management committees (CMCs) to assist in the execution of its mandate. The CMCs may incorporate various stakeholders

such as board members, CMA employees and any person with skills required by the CMA.

#### **4.3.7 Water Research Commission (WRC)**

The Water Research Act, 1971 (Act No. 34 of 1971 as amended) (hereafter referred to as WRA) established the Water Research Commission (WRC). The WRC is a public entity in terms of the Public Finance Management Act, 1999 (Act No. 1 of 1999) (hereafter referred to as PFMA). The WRA promotes research in the water sector and its value chain and to achieve this objective, the WRA established the WRC and the Water Research Fund. The WRC's mandate conforms to the requirements set out in both the WSA and the NWA.

The WRC takes the leadership role in water research in partnership with a number of other stakeholders such as the Department of Water and Sanitation (DWS). In undertaking its role, the WRC funds and sets the water research agenda and ensures that new knowledge and capacity is developed in the sector. The achievement of sustainable management of water resources is paramount to the WRC's mandate, as well as undertaking advocacy to communicate research and its findings to water sector stakeholders and policy makers. The WRC reports to the DWS and is funded from the national fiscus (WRC 2018:19).

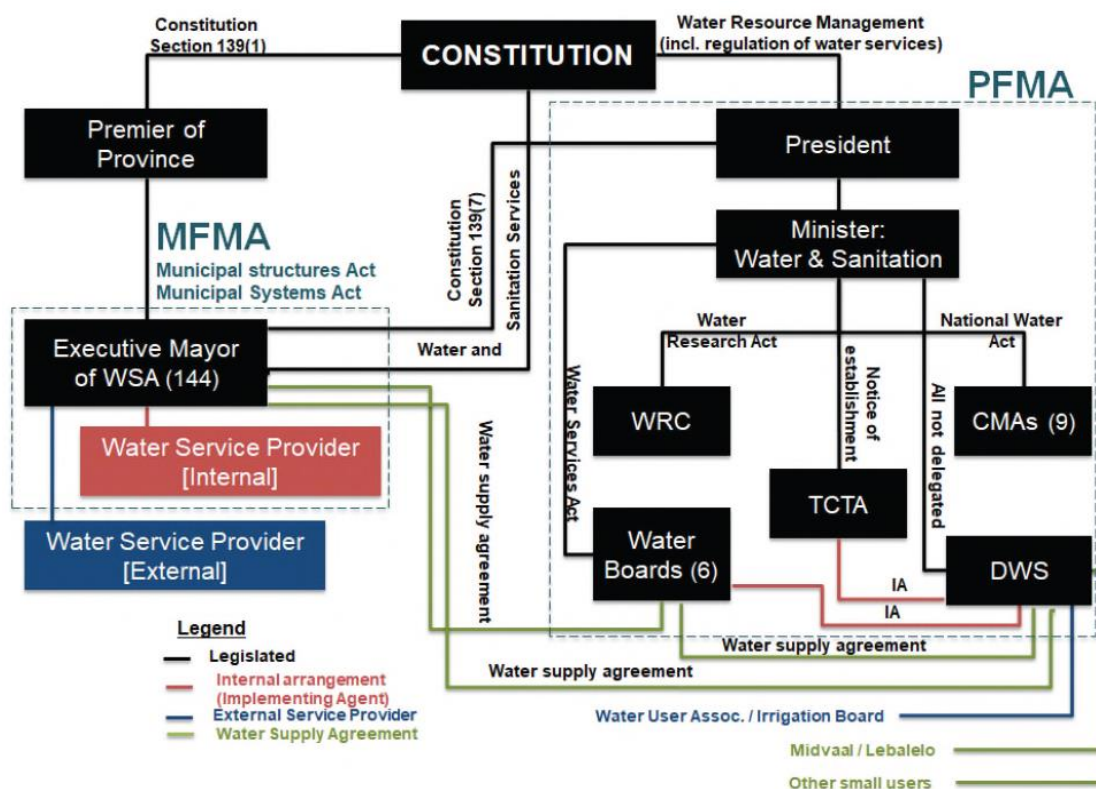
The mandate of the WRC is summarised as follows (WRC 2018:19):

- Determine the research needs in the water sector and rank these needs based on potential impact.
- Mobilise resources to fund water research based on predetermined priority research.
- Coordinate key activities in water research and development by establishing forums in the sector and disseminating information to stakeholders.
- Promote the transfer of new innovations and technological developments.
- Enhance knowledge transfer through capacity building initiatives in the water sector.

#### **4.3.8 Challenges with the institutional arrangements**

As discussed above, the governance framework in the water sector in South Africa is fragmented with reliance on various pieces of legislation apportioning responsibilities

to different institutions across the water value chain. Institutions that are responsible for water resource management, catchment management areas, the TCTA and water boards are all governed by the PFMA with the Minister of Human Settlements, Water and Sanitation exercising executive authority over them. The DWS is active across the value chain acting both as a sector regulator and public policy maker which blurs the lines of accountability and transparency. Municipal water services are governed by the trilogy of administration of National Treasury on finance matters, the DCOG on local government issues and the DWS on the water sector. The epitome of this arrangement is that these three national departments oversee different legislation which has a bearing on local government matters including water services (Hollingworth, Koch, Chimuti & Malzbender 2011:viii). **Figure 4.6** provides a high-level overview of the financial management governance framework within the water supply value chain:



**Figure 4.6: Governance framework for water in South Africa**

Source: DWS (2018b:12-15).

The fragmentation identified in the water sector results in the absence of a coherent economic regulation policy in the entire water value chain. The DWS is currently both

the public policy maker and an economic regulator for the sector, essentially being the player and the referee on raw water tariffs (Pegasys 2012:15). Hollingworth *et al.* (2011:viii) describe the role of the DWS as “enforcer, enabler and supporter”. These roles are often conflicting and unlikely to achieve the stated outcomes simultaneously. Locating key governance functions such as shareholder, policy maker, sector regulator and economic regulator (tariff setting) in a single government department under one minister creates conflict of interest which may impede the proper functioning of the overall sector (Storer & Teljeur [Sa]:22; Steyn 2011:28). In addition to the several role players in the water sector, the President during the State of the National Address (SONA) announced the establishment of a “National Water Resources Infrastructure Agency” (The Presidency 2021:21).

The institutional arrangements in South Africa’s water sector allow for high ministerial discretion which sometimes is very problematic given the perverse incentives in the governance system. The National Water Act establishes the Water Tribunal to separately review the DWS administrative actions, but this is not considered as a typical independent regulator (NEDLAC 2007:16). The Water Tribunal was created to promote water security and be a platform where disputes in the water sector are adjudicated. However, there is limited development of jurisprudence of water law given the ineffectiveness of the Water Tribunal. The Water Tribunal is argued to have created more confusion and disputes are now being resolved through other mechanisms such as the High Courts (Couzens, Maduramuthu & Bellengère 2017:1). Baboolal-Frank (2019:116) argues that the decisions of the Water Tribunal have the same standing as those of the Magistrates’ Court and often decisions are taken on appeal to the High Court. The Water Tribunal lacks experience and knowledge and has not operated at full capacity. The appointment of the members of the Tribunal is governed by Section 146 of the National Water Act. The Minister of Human Settlements, Water and Sanitation appoints members of the Water Tribunal on the recommendation of the Judicial Service Commission and the Water Research Commission. Regrettably, the Water Tribunal’s members are appointed by the same Minister in charge of water and this further blur the lines of accountability. To show the conflict of interest and unfettered power of the Minister in the water sector, the Minister in early 2020 directed all water boards not to increase water tariffs to municipalities due to the impact of the COVID-

19 pandemic. The directive from the Minister was made despite the fact that water boards incurred increasing electricity and labour costs (Paton 2020). Consequently, water boards now face financial distress and requested funding from the fiscus through the Minister (Paton 2020). This indicates the sweeping powers granted to the Minister to make policy interventions in the sector without any checks and balances. This scenario led to the call for the establishment of an independent water regulator to remove some of the functions from the direct control of the DWS and the Minister. The independent regulator is envisaged to enhance the overall efficiency in the value chain and promote cost reflective water tariffs (National Treasury 2019e:27; Steyn 2011:28; Storer & Teljeur [Sa]:22).

Regulatory independence is critical given that the DWS is unable to effectively reconcile its multiple and sometimes conflicting roles and responsibilities (Hollingworth *et al.* 2011:x). Independent regulation provides certainty both in terms of regulatory process, that is, methodology used and the expected returns on investment. The objective of economic regulation is to ensure that a monopoly provider of services such as water does not abuse its market power by setting maximum tariffs which achieve a predetermined high return. Economic regulation ensures that “goods or services are provided in a cost efficient, fair, sustainable manner, and without abusing monopoly position” (Hollingworth *et al.* 2011:x). Economic regulation takes into consideration social and economic priorities set out by the policy makers. The DWS has been exploring the creation of an independent water regulator to mitigate some of the challenges in the sector. The potential efficiencies to be achieved with independent water regulation include improving overall efficiency and effectiveness, ensuring cost recovery price setting and providing certainty to potential private investment (National Treasury 2019e:27; National Treasury 2011:139). Over the past decade, South Africa expressed its intention to establish a Water Services regulator, but the process has stalled due to policy inertia (Steyn 2011:3) whilst some stakeholders believe that the process is ongoing (National Treasury 2019e:27).

South Africa has an established history in creating sector-specific independent regulators and this started with the independent broadcasting regulatory authority as stipulated in Section 192 of the Constitution. This created a precedent and government found merit in establishing more independent regulators (Steyn 2011:2).

Independent regulators have an overriding purpose to protect public interest and to ensure fairness. Since 1994, South Africa has established a range of independent regulatory authorities to pursue public interest objectives and mitigate the potential abuse of monopoly power. Surprisingly, independent regulation in the water sector has not taken place despite a myriad of government documents advocating for such an entity.

In summary, from the discussion above, national government is responsible for development of public policies in the water sector while municipalities are responsible for water treatment and final reticulation of potable water to their residents.

The following section discusses the institutional arrangements in local government and the role played by each stakeholder.

#### **4.4 Legislative framework and institutions involved in municipal funding**

The Constitution assigns several responsibilities to different entities to oversee the proper functioning of the local government sphere in South Africa, and these stakeholders include national government departments, provincial government as well as organised local government. This section describes the role of each stakeholder in financing infrastructure in local government. Furthermore, empowering legislation for the respective stakeholders is also discussed.

##### **4.4.1 Local government legislation**

Towards the path to democracy, the Local Government: Transition Act, 1993 (Act 209 of 1993) (hereafter referred to as LGTA), was enacted to provide a framework for transforming the local government system from a discriminatory to a democratic regime. The key tenant to be embodied in the LGTA is transformation that should be decentralised to the local government sphere and should rest with each municipality. Each municipality is required “to integrate the services previously assigned separately to White, Coloured, Indian and Black communities” (Oosthuizen & Thornhill 2017:437). The aspirations of the LGTA were ultimately captured in the Constitution.

Chapter 7 of the Constitution pronounces that local government should be served by democratically elected representatives (councillors). Municipalities are empowered to govern their local affairs in compliance with national legislation. Section 152 of the



Constitution defines the objects of local government as to “provide democratic and accountable government for local communities; ensure the provision of services to communities in a sustainable manner; promote social and economic development; promote a safe and healthy environment; and encourage the involvement of communities and community organisations in matters of local government”.

The White Paper on Local Government, 1998 (hereafter referred to as the White Paper on Local Government) sets out principles to be considered by municipalities when deciding upon the service delivery option(s). These principles include accessibility of the service to a significant number of residents; affordability of service to both the municipality and residents; quality of the product and service; a clearly defined accountability mechanism; long run sustainability of the service and achievement of value-for-money (Fourie 2008:561). The framework in the White Paper on Local Government found expression in legislation that was enacted to support the objects of local government. Some of the options considered as service delivery mechanisms to compliment traditional service delivery options include “privatisation, outsourcing, public private partnerships, service level agreements and joint ventures” (DWAF 1994:12).

Several Acts of Parliament have been promulgated to support the above stated objects of local government by establishing structures to enhance delivery and promote accountability. Some of the key legislation includes the following:

- *Organised Local Government Act, 1997 (Act 52 of 1997) (OLGA)*

The OLGA was enacted to provide a mechanism by which municipalities attain recognition and their interests are represented at national and provincial government spheres. The recognition is in various forms, such as local government having designated representatives in the National Council of Provinces (NCOP) and to be a partner in all matters that affect local government. The OLGA also sets parameters for the nomination of representatives to the Financial and Fiscal Commission to advocate for the equitable distribution of resources for local government (MISA 2019:17). The South African Local Government Association (SALGA) is recognised as a representative of Organised Local Government.

- *Local Government: Municipal Demarcation Act, 1998 (Act 27 of 1998)(MDA)*



The MDA sets the criteria and procedures to be considered in reviewing municipal boundaries by the Municipal Demarcation Board which is an autonomous institution. The Municipal Demarcation Board periodically reviews municipal boundaries resulting in the reduction (or amalgamation) of municipalities over time. Prior to a democratic South Africa, there were 1 262 local authorities, and these were later consolidated to 843 in 1994. After the elections in 1999, the number of municipalities was trimmed to 284 and then 283 in 2006, and 278 yet again in 2011. The current number stands at 257 municipalities after the municipal elections in 2016 (Ncube & Pillay 2020:19).

- *Local Government: Municipal Structures Act, 1998 (Act 117 of 1998)*

The Municipal Structures Act provides guidelines for establishing different categories of municipalities and assigns functions and powers to each type of municipality.

- *Local Government: Municipal Systems Act, 2000 (Act 32 of 2000) (MSA)*

The MSA establishes “a framework for planning, performance-management systems and resource utilisation for municipalities”. Chapters 4 to 6 of the MSA prescribe that municipalities should report their performance and be accountable to ratepayers. In the context of the study, the MSA regulates public-private partnerships, guides how municipalities may corporatise the delivery of public services, directs the process of establishing municipal entities and sets parameters for any partnerships with other entities or potential service providers. Municipalities have revenue-raising powers and Chapter 9 of the MSA champions the adoption of credit-control policies to ensure that residents pay for services, failure of which will result in the termination of services. For credit control policies to be operational, municipal councils are required to approve and adopt the policies as part of the budgeting process.

- *Local Government: Municipal Finance Management Act, 2003 (Act 56 of 2003) (MFMA)*

The MFMA was promulgated in 2003 to improve municipal budgeting and financial management and to enhance accountability in financial matters of municipalities and other entities in the local government sphere. Importantly, the MFMA establishes norms and standards to be followed by local government.

- *Local Government: Municipal Property Rates Act, 2004 (Act 6 of 2004) (MPRA)*

The MPRA provides the basis for regulating the way in which municipalities may levy property rates. The MPRA ensures “fair and equitable valuation methods of properties, a transparent mechanism for property rates exemptions, reductions and rebates through council approved rating policies”.

- *Intergovernmental Relations Framework Act, 2005 (Act 13 of 2005) (IGFRA)*

The IGFRA’s objective is fostering coordination and better aligned policy and legislation implementation within the overall government system. It provides the foundational framework for government entities across the three spheres to collaborate (including organised local government) and guides the settlement of intergovernmental disputes should they arise. Spheres of government exercise some flexibility in resolving common challenges in the spirit of cooperative governance (SALGA 2019:15).

- *Division of Revenue Act (DORA)*

The annual Division of Revenue Act (DORA) allocates funding across the three spheres of government through the equitable division of revenue raised at a national level. The basic purpose for the promulgation of DORA is to recognise that spheres of government have different powers to raise revenue. For instance, national government, through the South African Revenue Service (SARS) has the primary revenue-raising powers in South Africa and collects “taxes such as income taxes, value-added tax, fuel levies and customs and excise duties” (SARS 2019:8). Provinces have limited powers and their own sources of revenue, which include licensing fees, fines and gambling fees. The provincial revenue sources are not sufficient to meet the mandate and functions assigned to provinces in the Constitution.

Municipalities have their own revenue-raising powers from the ability to collect property rates, as well as user charges such as electricity, water and sanitation tariffs (this is further explained in **Section 4.5.1.**). As a result, municipalities are in a better position to fund their own constitutional responsibilities. However, municipalities differ, especially between rural and urban areas, and this impacts their ability to levy

property rates and user charges. Accordingly, the fiscal framework is designed to reflect these differences in the final allocations in DORA. The equitable share formula includes “a revenue adjustment factor to cater for the fiscal capacity of each municipality” in South Africa (National Treasury 2020c:99). This is further explained in **Section 4.5.1**.

The various Acts highlighted above are administered by national government departments who play an oversight role on local government matters. Additionally, organised local government is recognised in the Constitution with specific roles. These stakeholders are discussed below.

#### **4.4.2 The Department of Cooperative Governance (DCOG)**

The DCOG is a national government department responsible for local government matters in South Africa. The primary objective of the DCOG “is to build an efficient and progressive local government system that meets its obligations as enshrined in the Constitution” (National Treasury 2020a:13). The achievement of the objectives requires coordination within a system of cooperative governance working with all spheres of government. The DCOG coordinates activities for all stakeholders using systems, structures and platforms that enable integrated service delivery. In addition, the DCOG promotes sustainable development on several initiatives by providing support, capacity building and exercising oversight of other spheres of government (National Treasury 2020a:13).

The DCOG launched the Local Government: Turnaround Strategy (LGTAS) in 2009, in order to support sustainable development and capacity building within municipalities. The objective of LGTAS is to address poor governance, lack of accountability, weak financial management and high vacancies for senior management posts in municipalities (The Local Government Handbook 2019:19). The intervention was envisaged to accelerate service delivery and infrastructure development, improve financial management and create a responsive and accountable leadership that prioritises the needs of rate payers.

In 2012, the DCOG launched a public entity/agency called the Municipal Infrastructure Support Agent (MISA), to provide infrastructure development capacity support to municipalities without interfering with the governance and powers of municipalities (MISA 2020:22; The Local Government Handbook 2019:19).

Municipalities may request the MISA to provide technical support and, in some instances, the MISA offers such support based on its own assessment of the performance of the municipality. In the 2019/20 financial year, the MISA supported 87 distressed municipalities that faced challenges in infrastructure delivery which impacted services to communities (MISA 2020:22). The MISA has a number of programmes to support municipalities, namely technical support services and infrastructure delivery management support. These programmes “enhance the capabilities of municipalities for improved municipal infrastructure planning, delivery, operations and maintenance” (MISA 2020:26). The primary objectives of the support programmes are to improve municipal infrastructure delivery through the effective assessment of the infrastructure needs and to identify gaps which have to be accommodated in the future infrastructure plans.

In 2014, the DCOG launched another initiative called “Back to Basics” to assist municipalities to focus on their key policy and constitutional objectives. The programme was a direct response to the problems faced by a number of municipalities. About 37 per cent of all municipalities were operating at a relatively good level with a lot of improvements still required. In these municipalities the basics for service delivery, financial management and level of innovation are in place. However around 63 per cent of the municipalities were considered dysfunctional and urgent attention was required to turn them around and this led to the Back to Basics Programme as an intervention (DCOG 2014:6).

The “Back to Basics” Programme prioritises the “creation of decent living conditions for residents by developing bankable infrastructure plans, ensuring that infrastructure is maintained and setting service standards. Good governance, public participation and sound financial management are core pillars of the programme” (Oosthuizen & Thornhill 2017:448). DCOG is also the custodian of the District Development Model which was adopted by the South African Cabinet in 2019. The objective of the District Development Model is to enhance intergovernmental coordination and minimise the silo approach by three spheres of government and their agencies in delivering services to the community (DCOG 2021).

The authority of the DCOG is derived from a number of legislations such as the Local Government: Municipal Structures Act, 1998 (Act 117 of 1998), the Local

Government: Municipal Systems Act, 2000 (Act 32 of 2000), the Disaster Management Act, 2002 (Act 57 of 2002), the Local Government: Municipal Property Rates Act, 2004 (Act 6 of 2004) (MPRA) and the Intergovernmental Relations Framework Act, 2005 (Act 13 of 2005).

#### **4.4.3 National Treasury**

National Treasury is established by Section 216 of the Constitution as the custodian of all financial matters across all three spheres of government. National Treasury prescribes financial norms and standards to promote uniformity, and to guarantee efficient use of financial resources, expenditure control and transparency. National Treasury administers the National Revenue Fund and is responsible for making budget allocations, monitoring financial matters of all spheres of government, enforcing compliance and taking corrective measures where necessary.

The head of the National Treasury is the Minister of Finance who together with the officials of National Treasury have extensive powers conferred on them by the Constitution to guide the financial management framework of government. In local government, the MFMA empowers National Treasury to monitor municipal budgets, implement the approved budgets, collect revenue and examine borrowing trends, advise on budget compilation, issue guidelines for budget preparation, and carry out in-year budget monitoring and financial oversight to municipalities, among others. The National Treasury works with the 9 provincial treasuries in undertaking these functions. In addition, the National and provincial treasuries administer the MFMA, which is the cornerstone for regulating all financial matters in local government.

The MFMA provides for National Treasury and the provincial treasuries (with delegated powers from National Treasury) to investigate financial mismanagement, internal control failures and to recommend remedial actions. In instances where organs of state and municipalities materially and persistently breach establish norms, standards, applicable legislation and regulations set by National Treasury, Section 216(2) of the Constitution “empowers National Treasury to stop transfer of funds to a municipality until such a breach has been rectified”.

#### **4.4.4 Financial and Fiscal Commission (FFC)**

Section 220 of the Constitution establishes the FFC with its primary role of making recommendations to government, national and provincial legislatures on financial

and fiscal matters impacting all spheres of government. Recommendations to Parliament and provincial legislatures are done in terms of Section 214 of the Constitution and Section 9 of the Intergovernmental Fiscal Relations Act, 1997. The FFC “advises Parliament and state organs on how the money collected in the National Revenue Fund should be fairly and equitably allocated across the three spheres of government to ensure that the legal mandate is fulfilled” (FFC 2019:11).

#### **4.4.5 South African Local Government Association (SALGA)**

SALGA is a representative of municipalities as envisaged in the Organised Local Government Act, 1997 (Act 52 of 1997). SALGA’s mandate is “transforming local government to fulfil its developmental objectives”. The mandate is achieved utilising the following anchors (SALGA 2019:1):

- Advocacy – lobbying for local government interests at various platforms.
- Acting as an employer body – represents all municipal members.
- Capacity building – supports municipal leadership with technical skills (councillors and officials).
- Support and advice – supports members in areas where they lack to ensure effective execution of their duties.
- Strategic profiling – elevates “the profile and image of local government amongst stakeholders, both locally and internationally”.
- Knowledge and information sharing – acts as a central knowledge hub for local government issues.

SALGA participates in various forums and consultative bodies such as the Budget Forum (consists of the Minister of Finance and Provincial Members of the Executive Council responsible for Finance), the National Council of Provinces (NCOP), and the Financial and Fiscal Commission (FFC). In addition, SALGA acts as the national employer for municipal workers and is involved in negotiating employment conditions with workers’ labour unions (The Local Government Handbook 2019:22). SALGA is funded from a grant from national government, but also raises additional funds from membership fees from municipalities and donations.

#### **4.4.6 Challenges with institutional and legislative set-up**

As discussed above, the local government governance framework in South Africa is fragmented with reliance on various pieces of legislation apportioning responsibilities to different institutions. Municipalities are governed by the MFMA and the Local Government: Municipal Systems Act (MSA), among others. Fragmentation of the governance system frequently results in duplication of efforts by different institutions and sometimes neglect of other areas of joint responsibility. To illustrate this, National Treasury is responsible for financial management matters as prescribed in the MFMA and at the same time the MSA prescribes the process for entering into municipal PPPs (which has a significant financial management component). The MSA is administered by the Department of Cooperative Governance (DCOG) and National Treasury is responsible for the MFMA implementation. Governance of the water sector involves various institutions at all spheres of government and for efficient delivery, intergovernmental coordination is required.

#### **4.5 Funding options for municipal water infrastructure in South Africa**

Infrastructure expansion to cater for increased demand of services due to population growth and maintenance of existing networks contributes to the challenges faced by the water supply sector in South Africa. Infrastructure required for extension of the water supply network is necessary to increase the service coverage to the majority of the population. As indicated in the preceding section, both expansion and infrastructure backlogs require substantial investment from various sources which government is not always able to fully fund. The limited funding opens up a way for market-based solutions such as PPPs to occur (National Treasury 2021b:156; Prasad 2007:4).

This section highlights funding sources available to municipalities for infrastructure investment and it includes transfers from national government, municipal own revenue sources, long-term borrowing, issuance of bonds and public private partnerships. An array of municipal legislation sets out the parameters for sourcing funding for infrastructure investment by municipalities. As discussed briefly in the preceding section, the key legislation guiding financial matters for municipalities are the MFMA, the MSA and the Division of Revenue Act (DORA). The key provisions related to infrastructure financing (capital projects) in each Act is explained when discussing each potential funding source.



#### **4.5.1 Transfers from National Government**

The allocation of funding across the spheres of government is done through the annual Division of Revenue Act (DORA) as stipulated in Section 214(1) of the Constitution. The DORA governs the division of nationally raised revenue in line with equity principles and is amended on a yearly basis to consider the Medium-Term Expenditure Framework (MTEF). The MTEF is “a three-year budgeting cycle to ensure predictability and stability in government finances” (Oosthuizen & Thornhill 2017:437).

The allocations are based on the powers and constitutional mandate assigned to the respective spheres of government. Key allocations determined by the DORA include: each province’s equitable share; other allocations to provinces, each municipality’s equitable share; and additional allocations to municipalities such as conditional grants for specific purposes. The DORA identifies the following sources of funding available to local government for financing infrastructure development: (i) unconditional grants (general purpose grants) such as local government equitable share (LGES), (ii) conditional grants (specific purpose grants) such as the Urban Settlements Development Grant (USDG), the Integrated Urban Development Grant (IUDG), the Municipal Infrastructure Grant (MIG), the Informal Settlements Upgrading Partnership Grant for Municipalities, the Regional Bulk Infrastructure Grant (RBIG), and the Water Services Infrastructure Grant (WSIG) (National Treasury 2020c:15; Oosthuizen & Thornhill 2017:441).

The various types of grants are discussed below in detail.

##### **4.5.1.1 Local Government Equitable Share (LGES)**

The LGES is an unconditional grant allocated to every municipality in the country and the municipality is not constrained in how it may utilise this grant. In other words, there are no conditions attached to this grant, however, it is mainly used to supplement either the operational or capital budget of a municipality and fund projects “such as provision of water, electricity, sanitation, refuse collection and to cover basic municipal administration costs” (National Treasury 2020c:15).

The LGES is formula-driven and is composed of two parts, namely a basic services component and an administrative and governance component. The allocation of the LGES is based on a predetermined formula which considers “the cost of providing

free basic services for indigent households, a subsidy for municipal administration costs, and a community services component” as illustrated below:

### **Structure of the local government equitable share formula**

$$LGES = BS + (I + CS) \times RA \pm C$$

*where*

**LGES** is the local government equitable share

**BS** is the basic services component

**I** is the institutional component

**CS** is the community services component

**RA** is the revenue adjustment factor

**C** is the correction and stabilisation factor

The basic services component (BS in the formula) reflects the subsidy allocated to poor households to enable provision of services. To support governance and administration, capacity for municipalities with limited resources is extended an allocation to fund institutional costs (basic municipal administrative costs) and support community services not included under basic services. Municipalities with low revenue raising power are then compensated in the formula by the revenue adjustment factor (National Treasury 2020c:38). Even though the LGES is formula driven, municipalities may decide to utilise this source of funding for infrastructure investment.

#### **4.5.1.2 Water Services Infrastructure Grant (WSIG)**

The WSIG's purpose is to fast-track the reduction of water and sanitation backlogs, especially in rural municipalities. The WSIG covers the entire project lifecycle, from planning to implementation of water and sanitation projects. During project implementation, the grant may be used to provide interim, intermediate infrastructure and support and for drought relief projects (National Treasury 2020c:52).

#### **4.5.1.3 Regional Bulk Infrastructure Grant (RBIG)**

The RBIG is allocated to municipalities to “develop new and to refurbish, upgrade and replace ageing water and sanitation infrastructure that has regional impact” (FFC 2019:147). In other words, the funded infrastructure projects connect and serve

multiple municipalities or several community groups in a single and large municipality (National Treasury 2020c:52; FFC 2019:147).

#### 4.5.1.4 Municipal Infrastructure Grant (MIG)

The MIG subsidises capital costs incurred by the municipalities in extending basic services to households unable to pay for the services. In addition, the grant is used to finance “infrastructure for basic services, roads, social services for poor households in all municipalities excluding the eight metropolitan municipalities” (National Treasury 2020c:52). The MIG also provides capital finance for micro-enterprises and social institutions servicing poor communities (FFC 2019:147).

Similar to the LGES, the MIG is also formula-based and considers a number of factors in the final allocations. **MIG = C + B + P + E + N**

- C = Constant factor to ensure that all municipalities receive a guaranteed allocation
- B = Basic residential infrastructure. Allocations based on proportional allocations for water and sanitation, roads and other services.
- P = Public municipal service infrastructure (including sport infrastructure).
- E = Allocation for social institutions and micro-enterprise infrastructure
- N = Allocation to the 27 priority districts identified by government

The weights of each component in the formula are different to indicate government intentions on how such a grant is utilised. The weights applicable for the 2020/21 budget cycle as captured in the DORA are highlighted in **Table 4.1**. Water and sanitation is prioritised in the MIG accounting for 48.9 per cent of allocations.

**Table 4.1: Municipal Infrastructure Grant weights per service**

Municipal infrastructure grant (formula)	Component weights	Value of component 2020/21 (R million)	Proportion of municipal infrastructure grant per sector
<b>B-component</b>	<b>75.0%</b>	<b>9 966</b>	<b>67.9%</b>
Water and sanitation	72.0%	7 176	48.9%
Roads	23.0%	2 292	15.6%
Other	5.0%	498	3.4%
<b>P-component</b>	<b>15.0%</b>	<b>1 993</b>	<b>13.6%</b>
Sports	33.0%	658	4.5%
<b>E-component</b>	<b>5.0%</b>	<b>664</b>	<b>4.5%</b>
<b>N-component</b>	<b>5.0%</b>	<b>664</b>	<b>4.5%</b>
<b>Constant</b>		<b>1 130</b>	<b>7.7%</b>
<b>Ring-fenced funding for sport infrastructure</b>		<b>253</b>	<b>1.7%</b>
<b>Total</b>		<b>14 671</b>	<b>100.0%</b>

Source: National Treasury (2020c:46).

#### 4.5.1.5 Integrated Urban Development Grant (IUDG)

The IUDG supports intermediate city municipalities to augment capital budgets to implement projects aligned to the integrated urban development framework. The IUDG's objective is to support public infrastructure investment which enables functional and efficient urban spaces. Municipalities that receive the IUDG are not eligible for the MIG and must meet qualification criteria such as technical capacity, management stability at senior level and effective utilisation of capital expenditure. Since the IUDG is a performance-linked grant, the cities must perform according to the agreed targets and if performance is unsatisfactory, they will move back to receiving the MIG. The MIG has active oversight from national and provincial government (National Treasury 2020c:46).

#### 4.5.1.6 Urban Settlements Development Grant (USDG)

The USDG is an integrated grant transferred to eight metropolitan municipalities to support investment in municipal services and to upgrade infrastructure in urban informal settlements. The USDG is allocated as additional funding for infrastructure investment to support integrated urban development. The USDG compliments metropolitans' own funding and other grants "to develop urban infrastructure and integrated human settlements" (National Treasury 2020c:48).

#### 4.5.1.7 Total DORA allocations over time

As discussed above, funding available to local government for infrastructure from national government is largely from the Urban Settlements Development Grant (USDG), the Municipal Infrastructure Grant (MIG) and the Equitable Share. For the 2020/2021 financial year, R26 billion was transferred to local government through the USDG and the MIG (National Treasury 2020a:260). These grants are used for water, sanitation, electricity, roads, storm water and human settlements, among others. Grants that are specifically targeted for water infrastructure development are the Water Services Infrastructure Grant (WSIG) and the Regional Bulk Infrastructure Grant (RBIG) with an allocation of R5.45 billion in 2020/21. The Equitable Share may also be used to fund capital projects but this decision is made by municipal council. However, some municipalities utilise the Equitable Share for municipal administration and operating expenditure. National Treasury (2018:15) reflects that 131 municipalities overspent in their operating budget for the 2017/18 financial year and the Equitable Share is mostly used to fund operational expenditure.

A total of R107 billion is available to local government for possible infrastructure investment but the proportion allocated to water infrastructure is substantially lower as shown in **Table 4.2**.

**Table 4.2: DORA allocations for Infrastructure development**

Grant Type	2020/2021 (R'000)	2021/2022 (R'000)	2022/2023 (R'000)
Equitable Share	74 683 326	81 061 819	87 212 717
Municipal Infrastructure Grant	14 671 101	15 936 791	16 852 001
Regional Bulk Infrastructure Grant	2 005 605	2 156 025	2 280 772
Water Services Infrastructure Grant	3 445 165	3 620 327	3 701 019
IUDG	948 031	1 015 025	1 075 368
Urban Settlement Development Grant	11 281 871	7 404 711	7 352 273
<b>Grand Total</b>	<b>107 035 099</b>	<b>111 194 698</b>	<b>118 474 150</b>

Source: National Treasury 2020d (Annexure W5, DORA 2020-21).

National government funding for all types of infrastructure (roads, storm water, water, electricity etc.) is not adequate to finance water backlogs estimated to be between R28 billion to R38 billion per year. In addition, more funding is still required for rehabilitation and investment of new water infrastructure to cater for new growth.

Given the mismatch between funding available from national government and the funding required to eradicate water infrastructure backlogs, rehabilitation and new infrastructure investment, alternative sources of finance are required to address water needs.

#### **4.5.2 *Municipal own revenue***

In addition to transfers from national government, municipalities have own revenue-raising sources such as property rates, service charges (water, sanitation and electricity), fees (fines, investment revenue, penalties etc) and other surcharges. Municipalities are obliged to bill residents and the money due is collected. Failure to pay municipal bills opens the residents to credit control and debt collection policy as directed by Sections 95 and 96 of the MSA (Oosthuizen & Thornhill 2017:436).

The user-pay principle was established in the RDP in 1994 and further re-affirmed in the White Paper of 1994. The RDP envisaged a scenario where services would be provided to all citizens in a manner that recovers the cost of providing the water service. In other words, citizens have to pay a reasonable fee to ensure that municipalities will not require government funding going forward. The tariffs for water services should cover capital costs, operation cost and replacement costs with the only exception in poor communities where government will provide a subsidy to the affected municipalities (DWA 1994:17). The vision of the RDP failed to materialise due to residents not paying for municipal services.

The ability of the municipalities to generate own revenue depends on where the municipality is located. There are significant differences between urban and rural areas as most rural areas have limited economic activity to provide a sustainable revenue base for the municipality. For instance, in large cities, municipal own revenue sources account for nearly 75 per cent of total revenue (FFC 2018:207). The biggest source of the own revenue in large cities is from service charges, which contribute between 37 per cent and 38 per cent of the total own revenue. Service charges are derived from trading services such as water, sanitation, refuse collection and electricity. The scenario is significantly different for smaller municipalities which raise less than 25 per cent of total revenue from own sources and rely on transfers from national government for 75 per cent of the revenue (National Treasury 2018:24). These municipalities have small towns as the main economic hub.

District and rural municipalities rely mostly on grant funding from government, while metros, large and small-town municipalities depend on own revenue from services such as electricity and water (National Treasury 2020a:72; Chitiga-Mabugu & Monkam 2013:4). The shrinking revenue base (increasing inability of the rate payers to settle bills) is posing a challenge to municipalities to adequately fund new and maintain existing infrastructure from own revenue sources. Declining revenue collection rates for municipal services have been witnessed over time. For instance, “in the first quarter of 2016/17, 65 municipalities collected over 95 per cent of money owed to them by the ratepayers and this declined to 52 municipalities in the first quarter of 2018/19” (National Treasury 2019b:74).

The unfavourable economic conditions in South Africa are contributing to the decline in collection rates and limit funding available for infrastructure investment (National Treasury 2019a:74; Palmer *et al.* [sa]). National Treasury (2019a:74) estimates that municipalities are owed around R159 billion by rate payers of which R115 billion represents household debt, commercial customers (R26 billion), organs of state (R10 billion) and other (R8 billion). Equally, municipalities as at June 2019, had outstanding debts of R29.7 billion (over 90 days). Of the R29.7 billion, 59.4 per cent was owed to Eskom and 21 per cent owed to the water boards (National Treasury, 2019b:19). This shows that municipalities are under financial pressure which limits their ability to deliver services based on predetermined outcomes and to cope with any adverse shocks to the economy (Chitiga-Mabugu & Monkam 2013:1). Harsh economic environment is constraining the ability of large cities to raise additional funding to finance infrastructure projects. Declining tariff collection levels and increasing debtors inhibit the potential for municipalities to raise additional revenue (Financial and Fiscal Commission (FFC) 2019:205; National Treasury 2019a:75).

Additional options available to municipalities include land disposal and development charges. These options are still not very popular and are discussed briefly below:

#### 4.5.2.1 **Development charges**

Development charges are not a recurrent source of revenue as they represent a once-off fee imposed by municipalities on property developers. The fee is imposed to cover the cost incurred by the municipality to put infrastructure into a new development (Ncube 2020:35). The key motivation for development charges is to



finance in full or partially the cost of additional municipal infrastructure required arising from additional developments (McGaffin, Napier & Gavera 2014:379). Given that development charges represent once-off fees, municipalities do not make provision to cater for subsequent operating costs and rehabilitation or replacement costs of the infrastructure. Development charges do not cover internal costs “such as sewerage or water connections to private stands, as these costs are borne fully by the land owner” (McGaffin *et al.* 2014:379). Fees derived from levying development charges to fund infrastructure projects are for example local roads, street lighting, water and sanitation. The benefit of development charges is that urban infrastructure development pays for itself if the levies are determined to fully recover associated costs. Furthermore, development charges have limited negative externalities to residents as they do not necessarily have to finance the municipality’s expansion, but instead shift the burden to property developers (Ncube 2020:35; National Treasury 2011:99). Despite its obvious attraction, development charges are still an insignificant revenue source for municipalities contributing less than “two per cent of the value of buildings approved” in a particular year (McGaffin *et al.* 2014:381; National Treasury 2011:99).

#### 4.5.2.2 Land-based financing strategies

Land-based financing is often linked to the “concept of value capture” which broadly describes the mechanism of extracting additional value from land or property from specific public investment. McGaffin *et al.* (2014:375) argue that the value capture process has four stages, “(i) the creation of the value, (ii) the calculation of the additional value created, (iii) the capturing of this value, and (iv) the use of the funds resulting from the captured value”. Value capture is traditionally associated with public auctioning of land or property with the proceeds used to invest in infrastructure in underserved areas. Value capture may have positive impacts in that it can contribute to poorer areas receiving services and amenities. Value capture mechanisms include development charges in South Africa’s case (McGaffin *et al.* 2014:376, 381).

The disposal of land by municipalities gained traction as a way of raising funding for infrastructure and in some instances funding operating expenditure. Historically, this option was only considered in instances where there was a funding shortfall, as municipalities regarded land as paramount for future development (Ncube 2020:45).

Land disposal was therefore discouraged as it undermined the long-term financial sustainability and limited potential growth of the municipality. In instances where the revenue from land disposal was used to invest in municipal infrastructure, it was argued that land appreciates in value compared to any infrastructure invested in and therefore a prudent financial management principle was for municipalities to use proceeds of municipal land disposals to procure land in areas earmarked for municipal development (National Treasury 2011:99).

#### **4.5.3 Long-term borrowing**

Local government has specific ways defined in the legislation, the MFMA in particular, on how to fund its budget and under what circumstances municipalities can borrow funds for capital investment. There are safeguards in the legislative environment to ensure that municipalities remain financially viable and do not borrow recklessly. Section 46 of the MFMA stipulates that long-term borrowing is permitted to finance capital investment/expenditure or re-finance existing long-term debt. The key instruments in the long-term debt financing at municipal level are long term bank loans and issuing of bonds. Given the complexity in issuing municipal bonds, most municipalities have not explored this option, leading to bank loans representing the greatest proportion of the municipal long-term borrowing (FFC 2018:210).

Long-term debt is incurred for purposes of achieving the mandate prescribed to local government in the Constitution. An accountability mechanism is provided in the MFMA which requires the municipal council to approve all long-term borrowing and this is further strengthened in Section 21A of the MSA which requires the public and National and provincial treasuries to provide comments. Section 75(1)(f) of the MFMA requires the municipality to upload all long-term borrowing contracts onto its website to improve transparency and accountability. The MFMA improved transparency in local government finances and resuscitated interest in local capital markets to provide long-term funding to municipalities. In addition, the MFMA enhanced the availability of credible local government financial information critical for credit market service providers to evaluate the applications (FFC 2018:208).

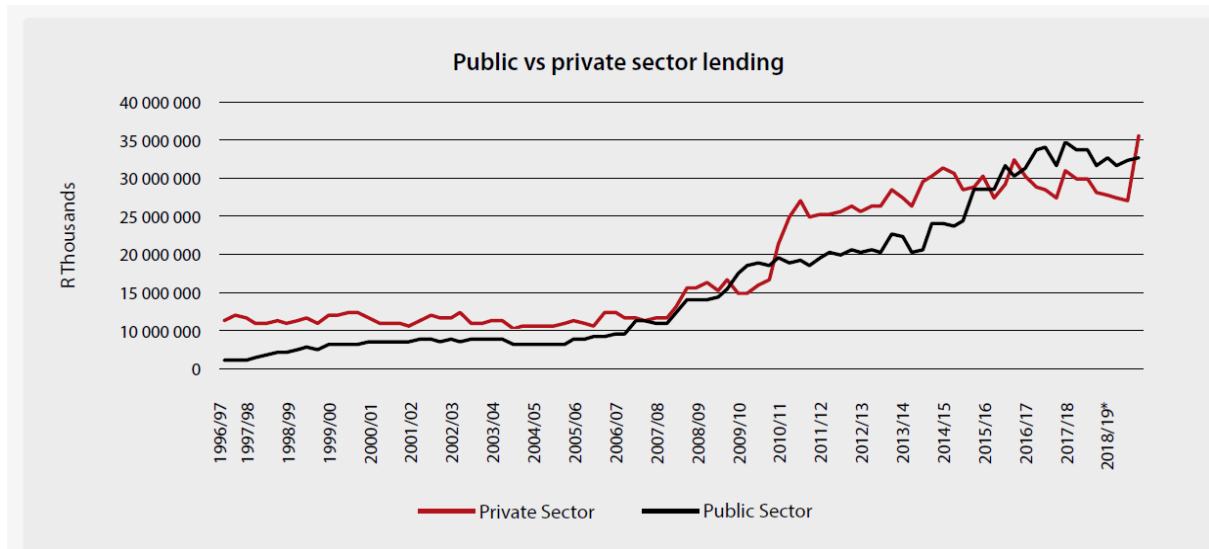
The MFMA places responsibility on local government to make prudent borrowing decisions to ensure long-term financial sustainability of the municipalities. Contrary to other countries such as Brazil, there are no set limits or fixed ratios on municipal

borrowing, that is, municipalities may borrow any amount for infrastructure investment, as long as the lender is satisfied that the municipality has capacity to repay. This was based on the assertion that the prospective lender undertakes due diligence and is therefore better positioned than government to determine a reasonable lending limit. Furthermore, national or provincial government does not guarantee any municipal debts and therefore no bail outs may be issued for poor financial management so as to promote financial discipline (National Treasury 2017:17).

Section 47 of the MFMA precludes municipalities from incurring debt denominated or indexed in foreign currency for both short-term and long-term debt, as a way of mitigating foreign exchange risk (National Treasury 2017:20). Although South Africa, has a well-defined legislated framework guiding municipal borrowing to fund infrastructure projects, many urban municipalities with fiscal space to borrow have not exploited this option to its full capacity and only a few metros and big cities are very active. Collectively, the largest cities (21 secondary cities and eight metros), which are drivers of economic growth have not exercised their ability to borrow. The reasons for the low and declining bank loans are unclear but may include inadequate financial management skills which adds a premium to the lending rates as a result of added risk (FFC 2018:206,211). The DBSA (2018:8) states that only a limited number of secondary cities borrow despite many of them indicating the intention to borrow at the commencement of the financial year and this could be due to projects plans not put in place on time. Water service authorities (municipalities) with low fiscal capacity have no access to borrowing as a result of their weak financial status and consequently rely on grant funding (DBSA 2018:8; DWAF 2007:22).

Cumulative municipal bond issuance on the other hand is increasing over time but this has not led to an overall increase in long-term borrowing (FFC 2018:212). The municipal debt market is dominated by a few players with both private and public sector funders and the bond market. The Infrastructure Finance Corporation (INCA) is the key private sector lender with commercial banks as a distant second. Public sector lending is controlled by the Development Bank of Southern Africa (DBSA) (FFC 2018:209).

For the period 1996/7 to 2018/19, cumulative private sector lending to municipalities outpaced that of the public sector as presented in **Figure 4.7**. By 2018/19, municipal long-term debt from the private sector was approximately R35.8 billion compared to R33.2 billion from public sector lenders. This trend is indicative of private sector appetite to finance well-run municipalities with good credit ratings (National Treasury 2019d:4).



**Figure 4.7: Municipal long-term borrowing from public vs private sector**

Source: Adapted from National Treasury (2019d:4).

Constraints still exist in deepening the municipal debt market and some of these constraints include the following (FFC 2018:206, 211; National Treasury 2017:22; National Treasury 2011:95):

- The secondary bond market is not developed limiting the tradability of the instruments among bondholders. The impact of limited trading is a reduction of liquidity in the market which disincentivises subscriptions of municipal bonds as exiting may be difficult.
- The offer of short maturities on municipal debt by banks precludes municipalities from matching life span of the assets to the duration of the loan. This mismatch results in quicker maturities which municipalities have to finance through an increase in tariffs or other municipal charges.

- Compromised creditworthiness – the objects of local government include funding both economic and social infrastructure. Social infrastructure does not yield revenue but is costly to implement and this compromises the credit worthiness of many municipalities and consequently reduces capacity to incur further debt for economic infrastructure.
- Most municipalities lack treasury management skills and therefore there is no coherent borrowing strategy to finance infrastructure and rely on ad-hoc measures.

The DBSA (2018:8) identifies the following additional factors that impede municipalities from accessing credit from financial institutions:

- Inadequate infrastructure planning capacity – despite making a provision in the budget to borrow funds for capital expenditure, few cities actually proceed to borrow and the majority fail to produce credible plans. There is misalignment between infrastructure investment and financial planning.
- Unaffordability of the services due to adverse economic conditions putting pressure on rate payers (both individuals and businesses).
- Tariffs charged for some municipal services are not cost reflective leading to lower margins and sometimes under recovery. As a result there is limited revenue available for infrastructure investment and limited scope for further borrowing.
- Increasing non-billable services due to water and electricity losses limiting the financial capacity of the municipality to access additional borrowing.
- Poor enforcement of credit control policies resulting in services rendered without full payment. Collectively, these actions degrade the municipality's credit worthiness and impact its ability to access additional borrowing for infrastructure investment.

#### **4.5.4 Donor Funds**

There is limited donor funding for water infrastructure projects in the local government sphere. In 2009, donor funding represented less than 0.2 per cent of the national revenue (Hollingworth *et al.* 2011:24).

#### **4.5.5 Reconciliation of available funding versus backlogs**

The 2019 National Water and Sanitation Master Plan portrays the water and sanitation sector as financially sustainable with a massive funding gap, increasing municipal water debt estimated at R13 billion, unsafe water, poor infrastructure and poor municipal water governance (Petterson 2019:12). It is therefore undisputable that the overall water sector in South Africa is financially unstable and facing massive problems. The situation is even worse at municipal level where 78 per cent of the municipalities are considered to be vulnerable (DWS 2018a:47). The underlying reasons for the state of affairs at the municipal level are diverse and vary across municipalities as described above.

Quantifying the exact number of water backlogs and the investment required to address them is a difficult task for government, given the rate of urbanisation, the emergence of informal settlements and limitations in accessing the state of water infrastructure which is largely underground. The DWS (2018a:48) estimates that over a 10-year period, approximately R898 billion is required to invest in new infrastructure, maintenance of existing infrastructure, and upgrading infrastructure at both national and local government level. Funding available from several sources is R565 billion leaving a funding gap of R333 billion over the 10-year period (DWS 2018a:48; Slater 2017:1).

To address municipal water infrastructure backlogs in South Africa, the DWS estimates that R28 billion is required per annum (DWS 2017:64). For 2017, Palmer *et al.* ([sa]) estimate a shortfall of R38 billion for local government water infrastructure after accounting for grants from national government, borrowing and internally generated revenue. Palmer *et al.* ([sa]) estimate that the projected shortfall over a 10-year period is over R227 billion. It is suggested from the studies cited above that the extent of water infrastructure deficit at the local government sphere is not precisely known, but what the studies have shown is that there is a definite need for investment in water infrastructure. Backlogs are estimated to range from R28 billion to R38 billion annually.

The above discussion points to the options available for local government to finance infrastructure projects (including water infrastructure). Given the constrained fiscal environment, national government is unlikely to finance all local government

infrastructure requirements. Equally, municipalities' own revenue sources are limited as a result of poor payment levels by ratepayers. Long-term borrowing from financial institutions whilst still theoretically feasible, is constrained by financial challenges faced by municipalities.

Of all the options available to local government to finance water infrastructure, public private partnerships are the least explored alternative and the purpose of this research is to understand why PPPs are not seen as a viable alternative. In general, less than two per cent of public infrastructure in South Africa is financed by private capital, compared to almost 50 per cent in the United Kingdom (Mahloele 2020). The use of private sector funding for infrastructure investment is becoming the most viable option for most developing countries given the constraints in public finances and the assumed efficiency of private sector players (Pusok 2016:680). The next section explores PPPs in detail as an alternative source of infrastructure financing.

#### **4.6 Public Private Partnerships in South Africa**

The first democratic government in 1994 sought alternative service delivery mechanisms in order to address backlogs and one of the options considered was PPPs (Fourie 2008:559). PPP involves private sector partnering with the public sector to provide public services. PPPs unlock private sector investment and technical skills which are sometimes lacking in the public sector or are underutilised. PPPs may bring about a structured process in resource utilisation since they are subjected to strict guidelines with accountability mechanisms in place and promote transparency (Fourie 2008:560). The Reconstruction and Development Programme (RDP) and the White Paper of 1994 set out priorities for government and one mechanism advanced was partnerships with the private sector, civil society, non-governmental organisations, international donor organisations and individuals with resources and skills. The White Paper of 1994 identifies the private sector as possessing the following areas of expertise which are critical for the advancement of the water sector: "capital investment, infrastructure maintenance, training and capacity building, organisation development and financing and commercial services" (DWA 1994:15). It is apparent that from as early as 1994, government recognised the potential of private sector participation in delivery of public services such as water supply.



This section outlines the evolution of PPPs in South Africa, the legislative provisions governing PPPs, the procurement process for PPPs and institutional support mechanisms for PPPs.

#### **4.6.1 Evolution of PPPs in South Africa**

The exact date when municipal PPPs commenced or various projects which could be construed as PPPs began is unknown and often a subject of debate (Minnie 2011:52). History records that in 1894, the Cape Town City Council granted Mr Henry Butters, “who was a local businessman, the right to build and operate the first electric tramway in the City” (Capeinfo 2020).

The events around the evolution of PPPs in South Africa are less debatable after the democratic elections in 1994. The Constitution which was adopted in 1996 does not make any reference to public private partnerships but alludes to general procurement in the public sector. Section 217(1) of the Constitution stipulates procurement guidelines and general rules applicable to all spheres of government. Procurement should conform to the principles of fairness, equity, transparency, competitiveness and cost-effectiveness.

In 1997, South Africa’s government represented by Cabinet, set up a multidisciplinary team from various national departments to explore whether PPPs could be a viable option to address infrastructure backlogs and new infrastructure development (Arimoro 2018b:216). The multidisciplinary team was chaired by National Treasury and its scope of work included among others, to develop a national policy to guide PPPs, make proposals on PPP implementation and identify potential hindrances to PPP roll-out (Arimoro 2018b:217). The pioneering PPP projects in the democratic South Africa occurred between 1997 and 2000 with projects such as the following (National Treasury, 2019:152; African Development Bank (ADB) 2017:62; Arimoro 2018b:216):

- The SANRAL N4 East and N3 toll roads (concluded 1998 and 1999 respectively);
- The Dolphin Coast and Mbombela water and sanitation concessions (concluded in 1999);
- The South African National Parks tourism projects (concluded in 2000); and

- The Mangaung and Makhado maximum security prisons (concluded in 2000).

The enactment of the Public Finance Management Act, 1999 (Act 1 of 1999) (hereafter referred to as PFMA), provided impetus for PPPs by detailing the procurement process to be followed. The PFMA establishes financial management guidelines for national and provincial government and assigns responsibilities to designated officials. Furthermore, the PFMA provides the legislative framework for procurement of goods and services of which PPPs form part. The government released a strategic framework for PPPs in 1999/2000 through the then Department of Finance (now National Treasury) (Arimoro 2018a:7; Fourie 2008:562). This framework ushered in regulations and policies to create an enabling environment for PPPs to prosper and contribute to the service delivery mandate of government.

In mid-2000, National Treasury set up a PPP unit initially staffed with five experts from government and the private sector. In addition, technical support was received from international development agencies such as the “United States Agency for International Development (USAID), the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) (German Aid) and the UK Department for International Development (DFID)” (ADB 2017:63; Arimoro 2018b:216).

In April 2001, National Treasury issued regulations called “Treasury Regulations for National Departments, Constitutional Institutions and Public Entities”. The Regulations were issued in terms of the PFMA. Section 16 of the Treasury Regulations (also referred to as Treasury Regulation 16 of 2001) further elaborated on the process, requirements, approval process and management of the projects and how PPP agreements may be amended. Thus, Regulation 16 outlines the life cycle of PPP projects and explicitly indicates that all PPP projects must first obtain approval from National Treasury before implementation. Treasury Regulation 16 does not impose a funding structure of each PPP but considers specific features of each project and the sector where the project belongs, for example, water or office accommodation. South Africa has no specific law governing PPPs but public sector procurement for national government and provinces is regulated by the Treasury Regulations 16 and 16A issued in 2001 and 2005, respectively. In addition, National Treasury provides some practice notes in the form of the PPP Manual and the Standardised PPP Provisions. The PPP Manual and the Standardised PPP

Provisions were issued in 2004 to provide clarity on the requirements and approval procedures of PPPs for national and provincial government (World Bank Group 2015a:11). The PPP Manual sets out a risk-assessment framework to guide project choices that leverage private sector investment. An important dimension introduced in the PPP Manual is the promotion of broad-based Black economic empowerment (BBBEE) in PPP procurement, as well as in subcontracting arrangements (World Bank Group 2015a:11). To promote BBBEE, all PPP bids issued to the market should have a Black economic empowerment (BEE) scorecard which sets out all the necessary BEE elements, targets, minimum thresholds and weightings. Bids received thereafter are evaluated and one of the considerations is having BEE partners in the deal. As discussed before, the historical context of exclusion in South Africa led government to introduce BEE in PPPs to achieve the following policy objectives among others (Mfunwa, Taylor & Kreiter 2016:14; National Treasury 2004:6):

- Ensure meaningful direct ownership of substantial stake in PPP projects by Black people.
- Achieve management control of PPP projects by Black people.
- Substantial sub-contracting of PPP projects done by Black owned firms.
- Ensure effective employment equity and skills development during the life cycle of the PPP project.
- Promote socio-economic development with benefits accruing to “SMMEs, the disabled, the youth, and non-government organisations within a targeted area of project operations”.

Municipalities are not regulated by the PFMA, Treasury Regulation 16 and the PPP Manual. PPPs at local government sphere were formally recognised as a procurement option by the enactment of the MFMA, although the MSA established the broad framework and outlined the requirements for municipal PPPs. As previously discussed, the MFMA was passed in 2003 and its purpose is to guide financial management at local government sphere. There is considerable policy uniformity between the principles of financial management in the PFMA and the MFMA. As a result, the MFMA is closely aligned to the PFMA even on matters related to PPP procurement. Section 120 of the MFMA and Chapter 8 of the MSA

outline the process for municipalities to follow when considering PPPs as an alternative financing option.

Section 168(1)(d) of the MFMA empowers the Minister of Finance in agreement with the Minister of Cooperative Governance and Traditional Affairs (COGTA) to issue regulations and guidelines regulating the financial management matters in local government including public-private partnerships (PPPs). Section 86A of the MSA read in conjunction with Section 120(1) and (2) of the MFMA, provides that the Minister of COGTA may issue guidelines for municipalities when assessing options for the provision of municipal services. Accordingly, the Ministers of Finance and COGTA jointly issued the Municipal Service Delivery and PPP Guidelines of 2005 (hereafter referred to as the Municipal PPP Regulations). These guidelines were gazetted to provide detailed procedures to municipalities and municipal entities considering entering into PPPs. Similar to the PPP Manual under the PFMA, the Municipal PPP Regulations also champion the use of Black economic empowerment (BEE) in the PPP procurement process. The BEE consideration is essential throughout the PPP project cycle and applies in all PPP agreements. The BEE policy objectives are the same for both the PFMA and MFMA and the corresponding regulations. In South Africa, foreign firms may participate in PPP tenders as long as they conform to the BEE requirements which are mandatory. The consortium should include BEE firms at different stages of the PPP cycle.

The demonstration of the value for money is required, irrespective of whether PPPs are considered in the PFMA or MFMA. In other words, justification of why PPPs are superior to other traditional procurement methods has to be demonstrated. Furthermore, other factors considered include “affordability, transfer of skills to municipal officials and transfer of appropriate technical, operational and financial risk to the private partner”. The MFMA and the MSA thus establish “value for money, affordability and risk transfer as prerequisites for PPPs at the municipal level”. Affordability covers a range of factors including impact on the municipality’s revenue, existing budget and forecasted budgets, financial commitments and the monitoring and enforcement capability of the PPP arrangement by the municipality.

There are additional laws that apply in the procurement of PPP projects to ensure fairness, transparency and to safeguard investor rights. In South Africa, the

Promotion of Administrative Justice Act, 2000 (Act 3 of 2000) in conformity with Section 33(1) of the Constitution advocate for the rights of citizens to fair administrative action. All administrative actions should be done in a lawful manner, exhibiting reasonableness and ensuring procedural fairness. In this regard, administrative action in PPP procurement must conform to these values and principles to ensure accountability, responsiveness and openness in the municipality's decision-making. All bidders for PPP projects must have an equal chance of being awarded the contract if they fulfil all the mandatory requirements.

To safeguard investor rights which are essential in attracting private sector investment, South Africa enacted the Protection of Investment Act, 2015 (Act 22 of 2015) (hereafter referred to as the PIA). Section 1 of the PIA defines an investor as an enterprise making an investment in South Africa irrespective of nationality. The PIA confers the same protection to foreign investors as those offered to indigenous investors. The PIA affirms the protection of investment as guaranteed by the Constitution and simultaneously establishes South Africa's sovereignty to regulate investments for the greater good (Arimoro 2018b:223). In South Africa, foreign firms may participate in PPP tenders as long as they adhere to the BEE requirements which are mandatory.

**Table 4.3** summarises some of the major policy and legislative developments which led to PPPs.

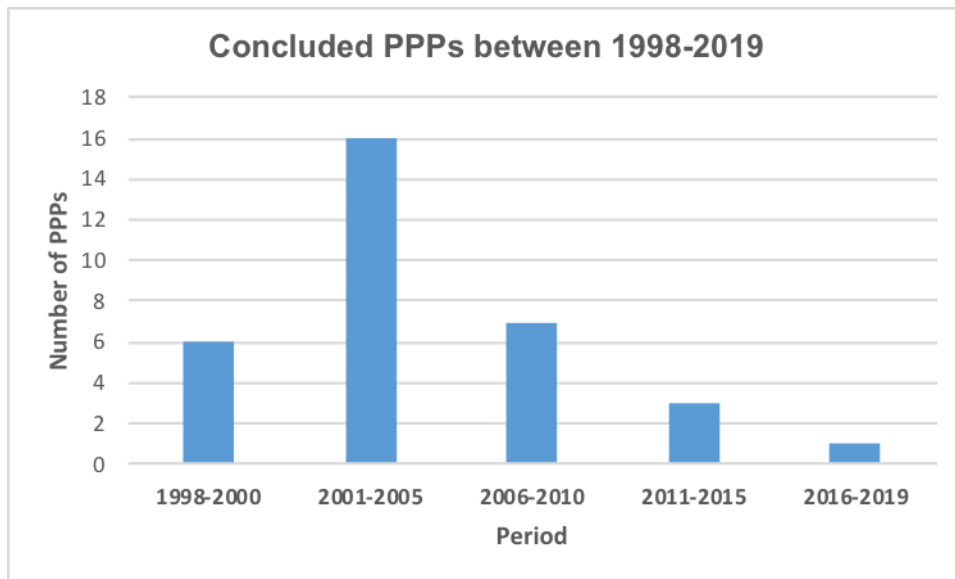
**Table 4.3: Legislative developments leading to formal PPP framework in SA**

Year	Policy or legislative developments
Pre 1994	No legislative guidance on the procurement of infrastructure using PPPs.
1996	Adoption of the first democratic Constitution. No specific mention of PPPs but provides general rules applicable to all spheres of government in the procurement of goods and services. Procurement should conform to the principles of fairness, equity, transparency, competitive and cost-effectiveness.
1997	Cabinet set up a multidisciplinary team to develop a national policy on PPPs.
1998	First PPP launched (SANRAL N4 East Toll Road) in February 1998.
1999	Enactment of the Public Finance Management Act, 1999 (Act 1 of 1999) in March 1999. The PFMA provides the legislative framework for procurement of goods and services of which PPPs form part. Three more PPPs

Year	Policy or legislative developments
	concluded in 1999.
2000	National Treasury set up a PPP Unit in the Budget Office to promote the implementation of PPPs.
2000	The Municipal Systems Act (MSA) was passed and establishes a framework for planning, performance-management systems and resource utilisation for municipalities. The MSA regulates public-private partnerships, guides how municipalities may corporatise the delivery of public services.
2001	National Treasury issued Treasury Regulations in terms of the PFMA to assist in the implementation of the PFMA. Regulation 16 outlines the life cycle of PPP projects and the approval process for all PPP projects for national and provincial departments,
2003	Enactment of the Municipal Finance Management Act (MFMA) to guide financial management at local government level. The MFMA establishes value for money, affordability and risk transfer as prerequisites for PPPs at the municipal level in line with the provisions in the MSA which was passed in 2000.
2004	National Treasury released the PPP Manual and Standardised PPP Provisions in terms of the PFMA applicable to national and provincial government and their public entities.
2005	Ministers of Finance and COGTA jointly issued the Municipal Service Delivery and PPP Guidelines of 2005. The guidelines provide detailed procedures to municipalities and municipal entities considering entering into PPPs.
2005	National Treasury issued revised Treasury Regulations in terms of the PFMA to assist in the implementation of the PFMA. Regulation 16A added to support the establishment of supply chain management capacity.
2006 - 2020	No significant policy change regarding PPPs over this period except that National Treasury in 2019 identified the need to review the PPP framework.

Sources: Author's compilation from several sources.

It is clear that South Africa's public policy makers played an active role in driving PPPs from the late 1990s to mid-2005. Since 2006, no significant improvements to the PPP policy environment were made and the 15 year gap seems to be too long for a comprehensive review process to have been made. One may argue that there is no need to change what is working, but the evidence showing low uptake of PPPs has been known as shown in **Figure 4.8**.



**Figure 4.8: Concluded PPP projects in South Africa over time**

Source: Adapted from National Treasury (2018:154-155).

There may have been justifiable reasons for the decline in PPP uptake such as the impact of the global financial crisis, however, PPP frameworks should be flexible or at least revised to consider the economic conditions and developments at the time. The changes to PPP frameworks as a result of the financial crisis were witnessed in a number of countries as discussed in **Chapter 3**.

The appetite for PPPs is different across the three spheres government and also differs by sector. National and provincial government accounts for 45.5 per cent each of all concluded PPP projects between 1998 to 2019. The transport sector (toll roads and fleet management) accounts for 27 per cent of all PPPs followed by health and accommodation, with each representing 24 per cent of the projects as shown in **Table 4.4**.



**Table 4.4: Split of PPP projects by sphere of government and sector - 1998-2019**

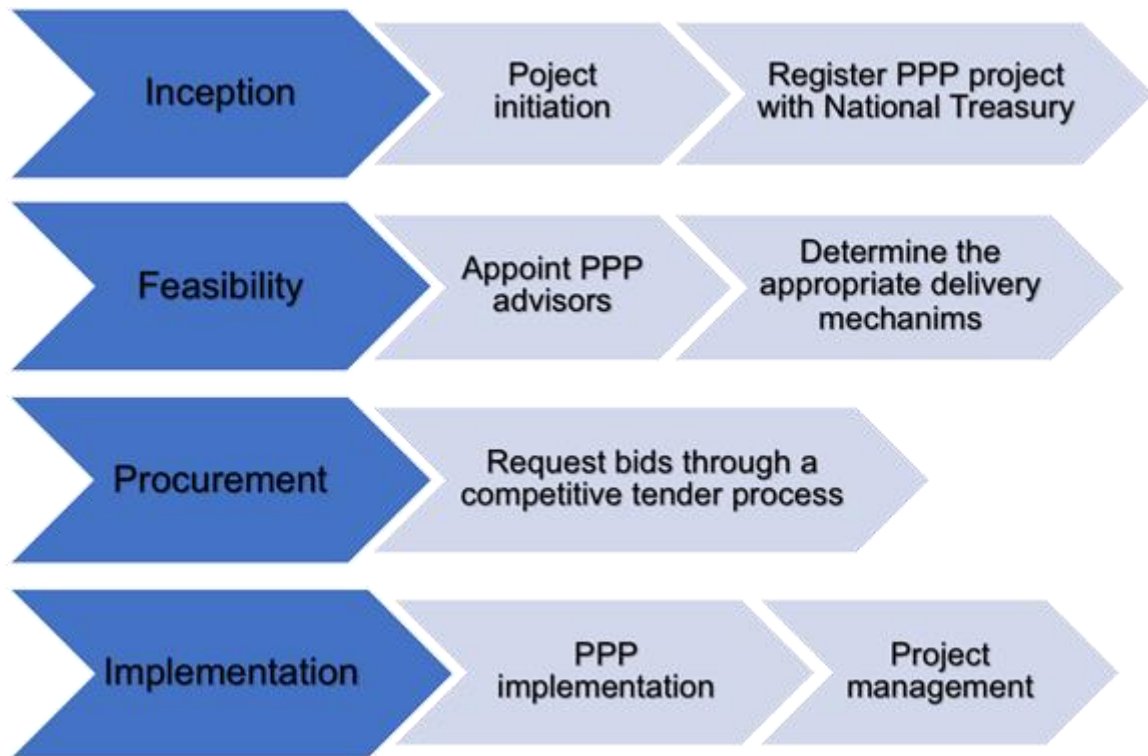
Sector	National Govt	Provincial Govt	Local Govt	Total	% total
Transport	5	4		9	27%
Water and Sanitation			2	2	6%
Information Tech	1	1		2	6%
Accommodation (office and prison)	7		1	8	24%
Health	1	7		8	24%
Tourism	1	3		4	12%
Total	15	15	3	33	100%
<b>% total</b>	<b>45,5%</b>	<b>45,5%</b>	<b>9%</b>	<b>100%</b>	

Source: Author's calculation based on data from National Treasury (2018:154-155).

The evolution of PPPs in South Africa lays the foundation and contextual background relevant for further assessment of PPPs. The next section provides a discussion of the municipal PPP project life cycle, that is, the process to be followed by municipalities when considering funding infrastructure through PPPs.

#### **4.6.2 Municipal PPP project life cycle/process**

The Municipal PPP Regulations identify four stages for a municipal partnership to be established, namely: "inception, feasibility study, procurement and PPP contract management" as indicated in **Figure 4.9**. Each of these stages are discussed briefly below.



**Figure 4.9: High level PPP Project Cycle**

Source: National Treasury, Municipal PPP Regulations (2005).

#### 4.6.2.1 Inception

The inception phase involves project initiation and defining the specific service requiring PPP. The identification of a project is based on a municipality's needs as reflected in the Integrated Development Plan (IDP) cascading down to the budget, and asset acquisition plans. The conceptualisation of the project and its service delivery options must be in line with the applicable law, that is, the MFMA and the MSA. The decision to follow a specific delivery option should be based on the factors outlined in Sections 77 and 78 of the MSA, which include the following:

- Cost (direct and indirect) and benefit accruing to the selected delivery mechanism.
- Municipality's capacity in terms of skills and other necessary requirements.
- Impact of the decision on municipal administration and human resources.
- Potential impact of employment.
- Opinions of organised labour.

If a municipality decides that a project will be implemented as a PPP, the following are required (National Treasury 2005:6):

- appointment of an internal project officer; and
- notification to the National Treasury, the Department of Cooperative Governance and Traditional Affairs, the relevant provincial treasury and the Department of Water and Sanitation is mandatory.

If the municipality has no capacity to appoint an internal project officer, external advisers may be appointed to assess and advise on the service delivery options (National Treasury 2005:6).

#### 4.6.2.2 **Feasibility study**

This phase involves review and further analysis of the needs to determine whether the project is affordable and technically viable. The situational analysis with respect to service backlogs plays a crucial role, as the priority is to ensure that households achieve the minimum levels for water access. High level business models are developed exploring the best and worst case scenarios associated with the project. The feasibility study in water projects has to comply with the applicable water sector regulations such as the Water Services Act, 1997 and whether the municipality has internal skills and financial backing to proceed with the project.

The national government may assist municipalities in conducting feasibility studies by providing financial support or assigning officials to work with municipalities. In the case of water projects, assistance may be provided by the Department of Water and Sanitation (DWS), the Department of Cooperative Governance (DCOG) and National Treasury. Once the feasibility study is completed, the municipal manager who is the accounting officer submits the report for council's consideration at least 60 days before the meeting. At this stage, Council is expected to approve-in-principle for the process to continue. In accordance with Section 21A of the MSA, the municipality should disclose publicly its intention and the specific particulars of the proposed PPP, including the feasibility study report, invitation for public comments or representations, and petition the views and recommendations of the National Treasury, the DWS, the DCOG and the respective provincial treasury.

#### 4.6.2.3 Procurement

Procurement of goods and services in South Africa's public service is guided by the principles of fairness, equity and competition. The competition aspect will be discussed further in **Section 4.6.4** as it relates to competition in the bidding market.

The municipal PPP procurement stage involves gate keeping by National Treasury and the respective provincial treasury and this is summarised in **Section 4.6.2.5**. Section 4(3) of the Municipal PPP Regulations specifies that "the municipality must specifically solicit the views and recommendations of the National Treasury on: (a) the proposed terms and conditions of the draft public private partnership agreement; (b) the municipality's plan for the effective management of the agreement after its conclusion; and (c) the preferred bidders (i) competency to enter into the public private partnership agreement; and (ii) capacity to comply with their obligations in terms of the public private partnership agreement".

#### 4.6.2.4 Contract Management

Section 6 of the Municipal PPP Regulations places the responsibility of managing the PPP agreement on the accounting officer or municipal manager who is the signatory of the PPP agreement. The municipal manager should ensure that the PPP agreement is implemented in tandem with the defined timeframes and any deviation should be justified and agreed to by all parties. The municipal council must be informed on the progress of the PPP implementation including any significant deviations. Section 7 of the Municipal PPP Regulations requires the accounting officer to table any amendment or variation of the PPP agreement to Council together with comments of National Treasury and the relevant provincial treasury.

#### 4.6.2.5 Summary of National Treasury's role in the PPP project cycle

The preceding section outlined the PPP project cycle and specified the roles and responsibilities of each stakeholder in the PPP project cycle. Given the prominent role of National Treasury in the process, a summary is provided in

**Table 4.5.**

**Table 4.5: Role of National Treasury in the PPP Project cycle**

<b>PPP Phase</b>	<b>National Treasury's Role</b>	<b>Comment on timelines</b>
<b>Inception</b>	<ul style="list-style-type: none"> <li>Municipality registers the proposed project with National Treasury.</li> </ul>	<ul style="list-style-type: none"> <li>National Treasury acknowledges receipt of the proposed project information.</li> </ul>
<b>Feasibility study</b>	<ul style="list-style-type: none"> <li>Treasury's views and recommendations required once the feasibility study is completed. This is referred to TVR I.</li> </ul>	<ul style="list-style-type: none"> <li>National Treasury and other relevant government departments given 30 days to comment on the feasibility study.</li> </ul>
<b>Procurement</b>	<ul style="list-style-type: none"> <li>Before issuing the Request for Proposal (RFP), the municipality engages Treasury to guarantee market receptivity of the proposed tender. The draft RFP and the draft PPP agreement are required for Treasury's views and recommendations (TVR IIA) required before the tender is advertised.</li> </ul>	<ul style="list-style-type: none"> <li>No prescribed time frames stipulated for National Treasury to provide TVR IIA.</li> </ul>
	<ul style="list-style-type: none"> <li>Treasury's views and recommendations (TVR IIB) required after the evaluation of the bids. The preferred bidder should not be informed before comments on the value assessment report have been received by Treasury (TVR IIB).</li> </ul>	<ul style="list-style-type: none"> <li>No prescribed time frames stipulated for National Treasury to provide TVR IIB.</li> </ul>
	<ul style="list-style-type: none"> <li>Treasury's views and recommendations (TVR III) required before finalisation of the PPP contract with the preferred bidder. TVR III is considered as an extension of the value assessment report as it brings the terms of the PPP agreement close to finality.</li> <li>TVR III application should be signed by the municipal manager and submitted to National Treasury, Provincial</li> </ul>	<ul style="list-style-type: none"> <li>A minimum of 60 days is prescribed prior to a council meeting to consider the PPP Agreement. Within the 60 days, Treasury and other relevant government entities must provide views and recommendations.</li> <li>National Treasury and other government entities should submit</li> </ul>

PPP Phase	National Treasury's Role	Comment on timelines
	Treasury, Department of Cooperative Governance and any other relevant national department.	views and recommendations within 30 days after notification.
<b>Contract Management</b>	<ul style="list-style-type: none"> <li>No defined role for National Treasury and other relevant government entities in contract management for PPP projects. The PPP Agreement includes contract administration, partnership and service delivery (performance) management. These are largely the responsibility of the municipality and its transaction advisors.</li> </ul>	<ul style="list-style-type: none"> <li>No defined timeframes for National Treasury and other relevant government entities to be involved.</li> </ul>

Source: Author's compilation based on Municipal PPP Regulations (2005).

**Table 4.5** indicates that there are no timeframes prescribed for the significant National Treasury's views and recommendations process (TVR IIA, TVR IIB).

The preceding discussion outlines the PPP life cycle in general. The next section explains the institutional set-up within the water sector that supports private sector participation in the municipal water infrastructure environment.

#### **4.6.3 Institutional set-up and reforms supporting water PPPs in South Africa**

Water policy evolved over time to reverse the discriminatory practices of colonial rule as presented in Section 4.3 above. Institutions were set up to support the reform process but, in this section, only reforms to support PPPs are discussed.

Apart from the Municipal PPP Regulations, South Africa does not have specific regulations governing PPPs in the water sector. However, the Municipal PPP Regulations have "feasibility study toolkits" for water and sanitation, solid waste management and commercial use of municipal property by the private sector. The water and sanitation toolkit is designed to help municipalities undertake feasibility assessment for potential partnering with non-state actors such as civil society and the private sector. As indicated before, municipalities are empowered to procure raw water, which is involved in water treatment and purification, distribution, storage, reticulation and delivery to final end customers.

Besides the Municipal PPP Regulations, there are limited reforms in the water sector that support PPPs, except a few policy directives, some of which were not

implemented. For instance, the Department of Water and Sanitation identified the necessity to create an independent water regulator over a decade ago. The justification for this policy position was to ensure cost recovery price setting, and provide certainty to potential private investors and the potential efficiency benefits accruing in the water sector (Ntola & Le Roy 2019). In addition, an independent regulator has limited political influence (Ntola & Le Roy 2019; National Treasury 2011:139).

The regulatory certainty created by an independent water regulator is instrumental in attracting private investment in the sector and guaranteeing returns on private capital (Ntola & Le Roy 2019). As highlighted before, the DWS is both a policy maker and regulator across the value chain. The dual role of the DWS creates perverse incentives and conflict of interest and is prone to political interference since both functions are subject to the same Minister. This scenario disincentivises private investment given the perceptions of heightened political interference (Ntola & Le Roy 2019). Unfortunately, the policy intent by the DWS has not led to the establishment of the independent water regulator for the past decade.

The Strategic Framework for Water Services (SFWS) of 2003 outlines the potential role of the private sector in the water value chain. The former Minister of DWAF observed the following (DWAF 2003:19):

*“we will not sell our public water services infrastructure to the private sector, but this is no obstacle to the private sector getting involved in a whole range of activities,”*

The SFWS defined the areas or activities for private sector involvement to include consulting services, outsourcing of meter reading and maintenance, construction, management of operations and various forms of financing (DWAF 2003:19).

#### **4.6.4 Competition in the tender or bidding market**

Procurement of goods and services in South Africa’s public service is guided by the principles of fairness, equity and competition. Procurement under PPPs should exhibit these principles to ensure that the municipality derives value-for-money through a competitive bidding process. In addition, PPPs should comply with the Competition Act, 1998 (Act 89 of 1998) (hereafter referred to as the Competition Act). The Competition Commission of South Africa is the statutory body discharging



responsibilities prescribed in the Competition Act. The purpose of the Competition Act is “to encourage and maintain competition and ensure a greater spread of ownership among companies”. Section 4 of the Competition Act prohibits collusive tendering in respect of companies that are in competition with one another. Municipalities during PPP procurement should check for compliance with the Competition Act and report any instances of potential collusion among companies.

As discussed in Section 4.6.2, the PPP procurement process adheres to the following steps:

- a) Request for Qualification (RFQs).
- b) Consult with National Treasury PPP Unit.
- c) Advertise the RFQ.
- d) Evaluate the responses.
- e) Appointment of the preferred bidder.

Procurement for PPPs may involve request for qualification (RFQ) in line with requisite legislation, and a municipality is recommended to conduct pre-qualification before requesting potential private sector players to participate. Pre-qualification is done to enable only suitable private sector players capable of executing the projects to be further evaluated. National Treasury’s PPP Unit must be consulted before the municipality issues a RFQ for further review. This consultation with National Treasury plays an important role in supporting market receptivity to the tender (National Treasury 2017a:24). The RFQ must clearly set out the payment mechanism envisaged by the municipality to provide certainty to the private investors. Complex PPPs usually involve various payment options as compensation to the private sector, namely payments directly “from a municipality (unitary payments), user fees or a combination of the two” (Schomaker 2020:812; Boyer & Newcomer 2015:133; Maryouri 2013:2010).

The advertisement of the RFQ must follow the municipality’s supply chain management policy and the procurement plan contained in the feasibility study. In general, other avenues used for tender advertisement include the Government Gazette, the municipality’s website and national newspapers. The last phase is the evaluation of the proposals.

Section 4.3 of the Municipal PPP Regulations reinforces the responsibility of the municipality to follow its supply chain management policy in awarding the tender and to specify at which stage “the views and recommendations of the National Treasury and the relevant provincial treasury must be solicited”. In addition, the Promotion of Administrative Justice Act, 2000 (Act 3 of 2000) outlines the “citizens’ rights to fair administrative action which include lawfulness, reasonableness and procedural fairness”. In this regard, the administrative actions by municipalities in PPP procurement should support a fair administration process, accountability and openness in decision-making. In conformity with the Competition Act, bidders should have an equal opportunity of success with no prejudice to any bidder.

After evaluation of the tender, the preferred bidder is selected and negotiations commence. The conclusion of the financial negotiations culminates in the signing of the PPP agreement and finalisation of the PPP contract management plan. Module 5 of the Municipal PPP Regulations prescribed that National Treasury, the DCOG and the public are given 60 days prior to signing off the contract to provide comments. The inputs are then incorporated into the final document that will require municipal council resolution to proceed with the PPP arrangement. After Council approval, the accounting officer of the municipality formally signs the PPP agreement binding the municipality to the provisions contained in the agreement. The conclusion of the formal agreement paves the way for implementation, which requires active contract management and monitoring.

#### ***4.6.5 Institutions to support PPPs in South Africa***

South Africa has several institutions which support the roll-out of PPPs. The focus by these institutions to PPPs vary, for instance, National Treasury’s PPP Unit has specific focus on PPPs, while the Development Bank of Southern Africa (DBSA) has PPPs as part of its infrastructure investment portfolio. These institutions are discussed in detail below.

#### ***4.6.6 National Treasury’s PPP Unit (now GTAC)***

In 2000, National Treasury established a dedicated PPP Unit in the Budget Office Division. The PPP Unit was set up from experts drawn from the public and private sectors, as well as experts from international development agencies (ADB 2017:63; Arimoro 2018:7). The PPP Unit provides technical and financial advice to all spheres

of government throughout the PPP project cycle. Specific responsibilities include the following (BRICS South Africa 2018:13; World Bank Group 2015a:13):

- develop and promote “the policy/regulatory framework for PPP”;
- prepare guidelines, develop standard templates for PPP agreements and manuals;
- advise on PPP project implementation;
- create a “Project Development Fund” to enhance PPP quality;
- develop “a portfolio of PPP transactions” and drive the flow of PPP deals;
- undertake advocacy, stakeholder awareness and capacity building to both government entities and the private sector
- conduct research to ensure that international best practice for PPP is followed;
- provide technical support to government institutions on a range of activities, for example, feasibility studies; and
- encourage a conducive environment by making sure that there is certainty in a regulatory framework.

Since its inception in 2000, the PPP Unit was located in the National Treasury’s Budget Office and in 2014, it was moved to the newly created public entity called the Government Technical Advisory Centre (GTAC) (GTAC 2019:12; World Bank Group 2015a:13). The GTAC was established in 2012 and provides advisory and technical consulting services to organs of state and conducts research and capacity building in a number of public finance areas. The GTAC is 100 per cent owned by the government and reports to the Minister of Finance as an entity of National Treasury (BRICS South Africa 2018:13). The GTAC provides the following services which are grouped into six business units namely; “transaction advisory services for PPPs, capital projects appraisal, technical consulting services, public expenditure and policy analysis, jobs fund project management and the municipal finance improvement programme” (GTAC 2019:19). The rationale for the GTAC’s establishment is to consolidate “National Treasury’s advisory and support activities within a dedicated centre with skilled expertise” (GTAC 2019:12). Although the PPP Unit at National Treasury is doing well in regulating PPPs, it lacks the resources to

promote PPPs and build capacity within municipalities to originate, implement and manage the PPPs (FFC 2017:4).

In terms of human capital, as at 30 April 2017, the GTAC had 17 professionals allocated to projects registered with the unit (Arimoro 2018b:22). In the 2018/19 financial year, the technical and advisory services programme (which includes PPP and Capital Projects) had a staff compliment of 38 (GTAC 2019:54).

#### **4.6.7 Municipal Infrastructure Support Agent (MISA)**

Similar to GTAC, the Municipal Infrastructure Support Agent (MISA) is a public entity reporting to the Department of Cooperative Governance (DCOG). The MISA was established in 2012 to provide capacity support to municipalities for infrastructure development (MISA 2019:19). The MISA has a sub-programme that facilitates capital raising by municipalities which includes PPPs. Despite these assertions, the MISA's involvement in PPPs remains unnoticeable at this stage.

#### **4.6.8 Development Bank of Southern Africa (DBSA)**

The DBSA is a developmental finance institution (DFI), which is 100 per cent owned by the government of South Africa and is accountable to the Minister of Finance. It was formed in 1983 to promote economic development, growth and regional integration through infrastructure investment (DBSA 2019:2). The DBSA originates and finances infrastructure projects across sectors in South Africa and recently started expanding further into the African continent. Its mandate is to promote economic and social development by mobilising financial and technical skills to allow consistent infrastructure development projects in Africa. The business model for the DBSA is different from commercial banks, which primarily focus on return on investment, but DFIs consider “developmental impact” return along with return on investment. To achieve this developmental impact, the DBSA not only issues loans but is actively involved in project support before (project preparation) and after funding of specific projects (Financial Mail 2018:10).

The DBSA has a specialised transaction division responsible for converting bankable projects into sustainable investments. Due diligence is undertaken on proposed projects. Municipalities and other public sector companies (State Owned Entities) represent a significant proportion of the DBSA's funding including PPPs. By 2019, the DBSA had 99 municipal clients with over R3.1 billion disbursed to municipalities

for various projects. The gross debt to municipalities in 2019 stood at R26.1 billion (DBSA 2019:27).

The DBSA also manages the Infrastructure Investment Programme for South Africa (IIPSA), which is a collaborative initiative between the South African Government and the European Union. The project had a total amount of €100 million for technical assistance such as project preparation, grant/feasibility studies or direct investment grants in specific projects, and funding was made available through an application process (DBSA 2020). Midvaal Local Municipality benefited from the project preparation grant in its proposed Midvaal Electricity Distribution Services PPP project (Creamer 2020).

#### **4.6.9 Gauteng Infrastructure Financing Agency (GIFA)**

Similar to DBSA, the GIFA's mandate is to provide "specialist financing solutions for key infrastructure projects in Gauteng Province" to provincial government departments, municipalities and other provincial government public entities (GIFA 2019:10). The GIFA assists provincial government departments to initiate and conceptualise infrastructure projects, conduct feasibility studies and develop bankable proposals (GIFA 2019:10). Given its limited budget of R58.5 million, to execute its mandate, the GIFA partners with established infrastructure financiers and financial sector players such as the DBSA, the Industrial Development Corporation (IDC) and the Public Investment Corporation (PIC) (GIFA 2019:11). The GIFA promotes bankable projects to investors through investor roadshows across the African continent. As at 31 March 2019, the GIFA had 32 projects at different stages: 12 projects at initiation stage, feasibility (2 projects), market study (11 projects), procurement stage (1 project), financial close (4 projects) and implementation (2 projects) (GIFA 2019:11). Some projects are conceptualised to be funded via PPPs.

#### **4.6.10 Infrastructure Fund**

The South African government provided seed money amounting to R100 billion to create a project pipeline of infrastructure projects. The seed funding will be blended with private sector funding to create a pool of financial resources to revive infrastructure projects in various sectors including water (The Presidency 2021:11). The government is also considering the establishment of a National Water

Resources Infrastructure Agency to fast-track water infrastructure investment (The Presidency 2021:21).

#### **4.6.11 Experiences of water PPPs in South Africa**

A formal PPP framework for local government came into effect in 2000 and 2003 with the promulgation of the MSA and the MFMA, respectively. This was followed by the Municipal PPP Regulations issued in 2005 to guide the process to be followed in entering PPP arrangements.

Although PPPs in local government existed prior to this date, there was no standardised process or formal recognition that these arrangements are PPPs (Walwyn & Nkolele 2018:4). PPPs for water services in South Africa's municipalities commenced before a formal PPP framework was put into place. Queenstown Local Municipality (now Lukhanji Local Municipality) was the pioneer in municipal water PPP in South Africa in 1992 when it awarded a lease contract to Water and Sanitation Services South Africa (WSSA) (Marin 2009:5). Stutterheim Local Municipality (now Amahlati Local Municipality) followed in 1993 and then Fort Beaufort Local Municipality (now Raymond Mhlaba Local Municipality) in 1995 with lease agreements. Two concession contracts with international operators were signed between the Dolphin Coast and SAUR, and between Nelspruit Local Municipality (now the City of Mbombela Municipality) and Biwater (Marin 2009:5).

PPPs in water took the form of leases, management contracts and concession agreements as indicated in **Table 4.6**. Since the promulgation of municipal PPP guidelines in 2005, no concession agreements (which reflect the largest contribution of the private partner) have been entered into in the water sector by municipalities. Since the commencement of the municipal PPP guidelines in 2005, only one management contract by Maluti a Phofung Local Municipality was concluded and received bids from two private companies (WSSA and Duval) and three public entities (Sedibeng Water, Band Water and Umgeni/Munitech). WSSA as a private company won the management contract ahead of public entities, dispelling the notion that private sector companies are expensive (Marin 2009:5). The City of Johannesburg's management contract occurred in 2001 before the promulgation of the municipal PPP guidelines in 2005. The National Treasury PPP database

discussed above only considers the two concession agreements as forming part of water sector PPP projects.

**Table 4.6: PPPs in the water sector in municipalities in South Africa**

Municipality	Type of Contract	Commencement and duration	Private Operator
Queenstown (now Lukhanji)	Lease	June 1992, for 25 years	WSSA
Stutterheim (now Amahlati)	Lease	1993, for 10 years	WSSA
Fort Beaufort (Nkonkobe)	Lease	1995, terminated in 2000	WSSA
Dolphin Coast (now KwaDukuza)	Concession	January 1999, for 30 years	SAUR with 5 local partners
Nelspruit (now Mbombela)	Concession	April 1999, for 30 years	Bidwater with local partners
Johannesburg	Management Contract	April 2001, for 5 years	SUEZ
Maluti a Phofung	Management Contract	November 2005, for 6 years	Uzinzo Water Services - (80% Amanzabantu, 20% WSSA)

Source: Marin (2009:5).

Despite the limited PPP projects in the water sector as indicated above, some of the projects faced difficulties during implementation. For instance, the PPP in Nelspruit (Mbombela) in 1999 encountered opposition from the municipal workers union, as the fear of replacing public sector jobs with private sector jobs was anticipated (Jones & Duncanson 2004:480). This was later resolved and the project continued. The PPP landscape has changed significantly as a result of the policy interventions undertaken by government to support PPPs with the reconfiguration of the PPP Unit and more regulations issued to guide the activities applicable in the PPP project cycle. However, these interventions did not result in material changes in sectors such as water at local government level. This is still indicative of persisting low



uptake of water PPP projects at local government level. This research intends to establish the reasons for such phenomena.

#### 4.7 Conclusion

**Chapter 3** explored international experience of PPPs by providing an in-depth analysis of China, Mexico, Brazil and the UK (England and Wales). The exposition of the international experiences was meant to uncover best practice regulatory frameworks from countries that have implemented a significant number of water PPP projects. The objective was to compare South Africa's PPP framework against the collective experiences of the four countries. The insights into why the PPP frameworks in China, Mexico, Brazil and the UK (England and Wales) achieve more PPP projects, what works, and how it works have been outlined, which informed the assessment of South Africa's framework and lessons thereof.

Based on the assessment of the regulatory environment, South Africa's PPP framework is much aligned with international best practice in most respects. However, there are areas that need revision. Some of the factors include the following:

- i. Frequent review of the PPP regulatory environment to determine its effectiveness and fit for purpose. South Africa has not undertaken any significant review since the Municipal PPP Regulations were put in place in 2005. Given the low uptake of municipal PPPs, the policy makers should have undertaken some reviews and understood any hinderances to make changes accordingly. This has been the case in Brazil, Mexico and China with frequent policy directives used to address specific issues that arose during PPP implementation.
- ii. Creating a framework for fast tracking smaller PPP projects – this provides an opportunity for the municipalities to get exposure to PPPs before large scale infrastructure is considered.
- iii. A centralised PPP unit providing transaction advisory services and approvals may not be suitable in instances where the appetite for PPP projects increases. Centralised PPP units were also deemed to be incapable of promoting, policy making and simultaneously regulating PPPs. To promote PPPs, a decentralised model is being utilised in other countries and more

powers given to state level and larger metropolitan municipalities to formulate PPP units to promote and plan for PPP projects.

- iv. No mandatory ex-post evaluation of PPP projects exists in South Africa. The limitation is that there is no independent assessment of the value for money.

The next chapter explores the empirical findings of the study, that is, assess the factors influencing the adoption of municipal public private partnerships (PPPs) in the water sector in selected municipalities in Gauteng Province. The primary focus of the next chapter is to provide empirical analysis and interpretation of the research findings.

## 5. CHAPTER FIVE: ANALYSIS OF FACTORS INFLUENCING ADOPTION OF PPPs BY SELECTED MUNICIPALITIES

### 5.1 Introduction

The preceding chapters provided a contextual overview of public-private partnerships (PPPs) within Public Administration (Chapter 2) and Chapter 3 outlined the international experience of water infrastructure PPPs in China, Mexico, Brazil and the United Kingdom (England and Wales) to establish best practice. Chapter 4 explored the PPP framework in South Africa with the objective of benchmarking it to international experience.

This chapter (Chapter 5) explores the empirical findings of the study. To recap, the study sought to assess the factors influencing the adoption of municipal public-private partnerships (PPPs) in the water sector in selected municipalities in Gauteng Province. In addition, the objective of the research was to assess whether the promulgation of the Municipal PPP Regulations has influenced the uptake of PPPs in water infrastructure projects by the selected municipalities. The primary focus of this chapter is to provide empirical analysis and interpretation of the research findings based on the research questions and objectives.

Firstly, the chapter outlines the background of Gauteng Province and a brief profile of each of the selected municipalities to assist in contextualising the respective case studies. Some of the variables considered include socio-economic factors, political dynamics and economic or financial factors that contribute to the adoption of PPPs. Secondly, the chapter summarises the research methodology (detailed discussion covered in **Section 1.9**) to position the discussion in this chapter. Thirdly, the chapter explores the factors influencing the adoption of water infrastructure PPPs based on the responses from the interviews and self-completed questionnaires.

The next section lays out the background of Gauteng Province and a brief profile of each of the selected municipalities to assist in contextualising the respective case studies.

### 5.2 Overview of Gauteng Province

As discussed in **Sections 1.2 and 4.2** of this thesis, South Africa has nine provinces namely, Eastern Cape, Free State, Gauteng, KwaZulu-Natal, Limpopo, Mpumalanga

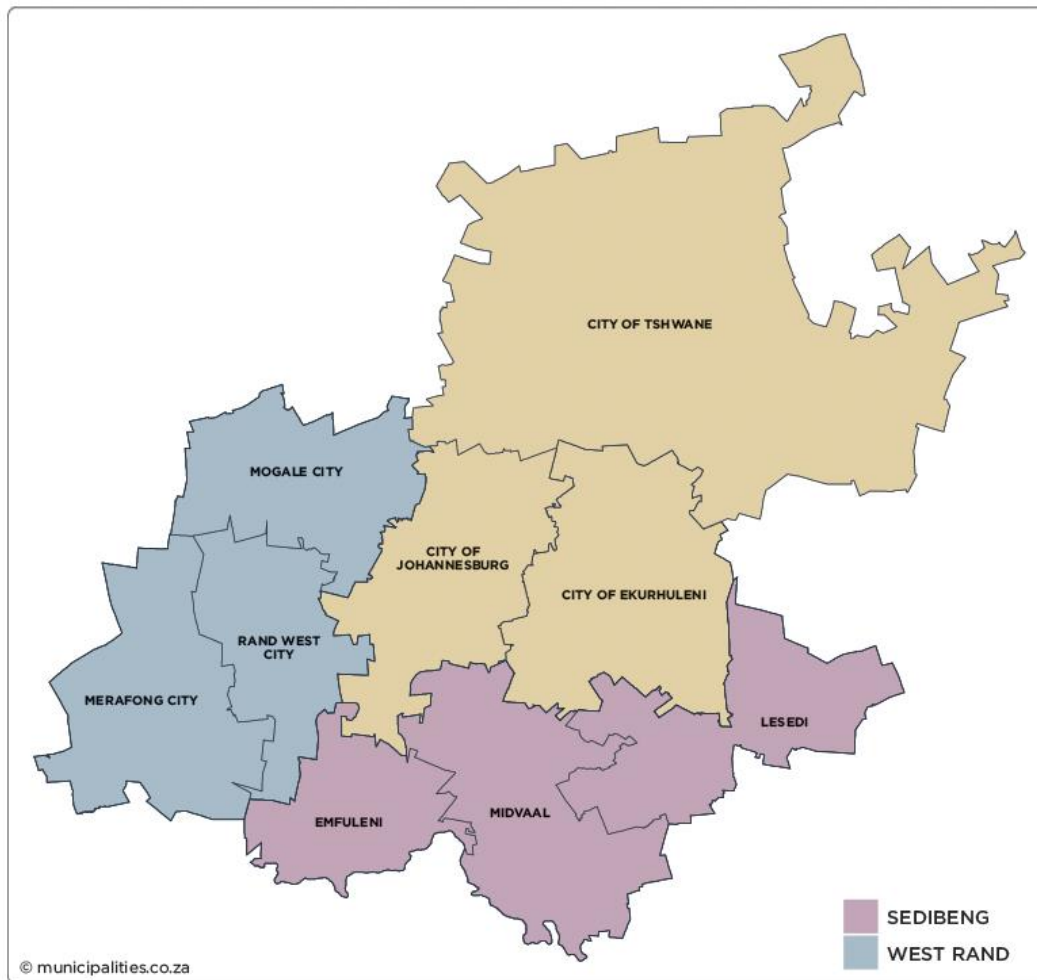
Northern Cape, North West and the Western Cape. Gauteng Province is the economic hub of the country accounting for over 34.8 per cent of Gross Domestic Product (The Local Government Handbook 2019:87), yet it is the smallest province accounting for 1.5 per cent of the land area size (StatsSA 2016:11). The Gauteng economy is largely driven by the services sector accounting for over 74 per cent and the manufacturing sector (14.5 per cent) with the remainder attributed to primary sectors such as agriculture and mining (Gauteng Treasury 2019:20).

In terms of annual economic growth, Gauteng experienced a decline from 3.6 per cent in 2010 to a projected decline of less than 2 per cent by the end of 2020 (Gauteng Treasury 2019:20). The 2020 projections, at the time, did not consider the impact of the COVID-19 pandemic and therefore the outcome is likely to be worse. Consequently, government interventions have been put in place to mitigate the negative impact through creation of programmes supporting employment opportunities and small-medium-and micro-enterprises (SMMEs) (Gauteng Treasury 2020:7). The COVID-19 pandemic resulted in the re-allocation of budgets to the health department and the implication was the postponement of some infrastructure projects potentially affecting service delivery – this underlines the importance of public-private partnerships given their lesser reliance on government funding.

Gauteng has a population of approximately 15 488 137 people based on the 2020 mid-year population estimates and accounts for 26 per cent of the total population despite contributing 1.5 per cent of the land area size (StatsSA 2020:17-18; StatsSA 2016:11). Gauteng Province has the highest population density than any other province in the country and the implication is that service delivery failure in a single municipality affects a significant proportion of the population compared to sparsely populated provinces. Due to high population density, municipalities in Gauteng Province face unique challenges of accessing land for infrastructure development as evidenced by the emergence of informal settlements across the province and major cities in South Africa (Nyashanu, Simbanegavi & Gibson 2020:1444).

Gauteng contributes 25 per cent of the working population in the country and as an economic hub it attracts more migrants than any other province in South Africa (Gauteng Treasury 2019:40; StatsSA 2020:16). Gauteng Province has 11

municipalities (3 metros, 6 local municipalities and 2 district municipalities as shown in **Figure 5.1**. The two district municipalities are Sedibeng and West Rand, each made up of three local municipalities. The three metros (the City of Johannesburg, the City of Tshwane and the City of Ekurhuleni) account for over 80 per cent of Gauteng’s households (Gauteng Treasury 2019:26) and this is the rationale for the study to use all of the three metros as case studies.



**Figure 5.1: Map of Gauteng Province and the municipalities**

Source: The Local Government Handbook (2019:87).

The governance structure of Gauteng is similar to other provinces with the provincial government composed of the provincial legislature responsible for enacting laws applicable within the province and provincial departments responsible for delivery of services within the provincial borders. The legislative authority is bestowed in the Premier (as the head of provincial executive) and other provincial executive

members (referred to as provincial cabinet members or Members of the Provincial Executive Council (MECs) (Van der Waldt 2013:10). Provincial government departments report to the respective MECs, for example, the Provincial Department of Cooperative Governance and Traditional Affairs reports to the MEC for Cooperative Governance, Traditional Affairs and Human Settlements.

### **5.2.1 City of Johannesburg Metropolitan Municipality (COJ)**

Johannesburg is an iconic city with a rich history dating back to the 16th Century. Historically, the main attraction for Johannesburg was gold which led to diverse population groups flocking to the city to make a living (COJ 2020a:44). In terms of population, population density and economic activity, the City of Johannesburg (COJ) is the largest metropolitan city in Gauteng and South Africa (Gauteng Treasury 2019:24). The finance sector is the dominant economic activity in the COJ accounting for 29.7 per cent and manufacturing for 11.1 per cent (Gauteng Treasury 2019:25).

The population of the City of Johannesburg is approximately 5.4 million people (from 4 949 347 in 2016) (COJ 2020b) representing 36 per cent of Gauteng's population (The Local Government Handbook 2019:89) and 9.24 per cent of South Africa's population (COJ 2020b). The COJ's population doubled between 1996 and 2016 due to both natural population increase and migration. Population growth averages 2.49 per cent in Johannesburg (The Local Government Handbook 2019:89). Approximately 80 per cent of the COJ's population is comprised of Africans, 10 per cent of Whites, and 5 per cent each for Coloureds and Asians (COJ 2020b). The City of Johannesburg has an area of 1 645km<sup>2</sup> translating to a population density of 3009 people per km<sup>2</sup>. The main suburbs in Johannesburg include Soweto, Alexandra, Sandton, Roodepoort, Diepkloof, Diepsloot, Ennerdale, Lawley, Lenasia, Meadowlands, Midrand, Orange Farm, Pimville and Randburg.

In South Africa, to govern a municipal council, a majority vote of 50 per cent plus 1 is required. After the local government elections in 2016, no political party achieved an outright majority in Council as presented in **Table 5.1**. A coalition government or multi-party government composed of the Democratic Alliance (DA), the Economic Freedom Fighters (EFF) and other smaller parties was formed and presided over

council affairs from 2016 to early December 2019. The coalition was led by the DA whose policies are anchored on capitalism or what the party describes as “social market economy” where private firms play an active role as opposed to government (DA 2020:4). A significant coalition partner, the EFF is a “radical, left, anti-capitalist and anti-imperialist movement” fighting for economic emancipation for the disadvantaged majority. The EFF associates itself with the protest movement in South Africa and champions any matter that seeks to reverse unjust laws (EFF 2020:4).

Given the divergent political orientation of the DA and the EFF, the management of the coalition government involved negotiation by the political parties on major policies such as insourcing of workers who previously provided services through contracted private companies and approval of the budget.

**Table 5.1: Political party representation in COJ Council**

Political party	Number of Seats	% of seats
African National Congress (ANC)	121	44,8%
Democratic Alliance (DA)	104	38,5%
Economic Freedom Fighters (EFF)	30	11,1%
Inkatha Freedom Party (IFP)	5	1,9%
African Independent Congress (AIC)	4	1,5%
African Christian Democratic Party (ACDP)	1	0,4%
ALJAMA	1	0,4%
Congress of the People (COPE)	1	0,4%
Patriotic Alliance (PA)	1	0,4%
United Democratic Movement (UDM)	1	0,4%
Freedom Front Plus (FF+)	1	0,4%
<b>TOTAL</b>	<b>270</b>	<b>100,0%</b>

Source: The Local Government Handbook (2019:89).

The impact of political party representation in Council plays an important role in this study, given that PPPs like any other financing mechanism have to be approved by Council. A majority vote is required in Council to approve a municipal budget of which PPPs form part. The impact of differences in political ideology in the consideration of water infrastructure PPPs is highlighted in **Section 5.4**.

The DA-led coalition government collapsed and a new ANC-led multi-party government was formed in December 2019 with some of the DA councillors voting for the ANC (Kubheka 2019). In order to bring stability to the coalition government,



the ANC-led council offered positions (Members of the Mayoral Committee) to the IFP, the AIC, the PA and COPE with the ANC taking the remaining six positions (Sidimba 2019).

The City of Johannesburg (COJ) estimates that its total infrastructure backlog is around R170 billion inclusive of water, bridges, roads and electricity (COJ 2019a:24). With respect to water, the COJ cited historical under investment in water infrastructure as an impediment in addressing the water needs for all its residents. Joburg Water (an entity of the City of Johannesburg) has an infrastructure renewal backlog of R5.8 billion and requires R12.65 billion in the next 10 years to replace critical assets that require refurbishment or replacement (COJ 2019b). The COJ has managed to renew only 0,2 per cent of its water network per annum against a target of 2 per cent per annum and this resulted in the reported cases of water bursts increasing to 33 856 in 2017/18 (COJ 2019a:24). Given the increase in water bursts, the COJ failed to meet its own target of responding to 95 per cent of water burst pipes within 48 hours and only managed to achieve an 89 per cent response rate. More than 25 600 households still require access to water in the COJ and this number is likely to increase if 296 000 households residing in informal settlements migrate to formal settlements (COJ 2019a:20).

The limited funding options to cater for infrastructure backlog resulted in the COJ exploring alternative funding models such as the capital markets. The COJ is rated Ba1 by Moody's given the diversified economic activities in the city as well as modest debt levels (Moody's 2020). The COJ liquidity position witnessed some improvement despite projected negative economic impact from the coronavirus pandemic. One of the limiting factors to the credit rating is excessive capital investment meant to address infrastructure backlogs and cater for population growth (Moody's 2020a).

### **5.2.2 City of Tshwane Metropolitan Municipality (COT)**

The COT has evolved over time as a result of the demarcation process which enlarged its boundaries. The COT was established on 5 December 2000 and integrated several municipalities which served Pretoria and the surrounding areas (COT 2020:8). Further changes to the boundaries were made in May 2008 which

incorporated the former Metsweding District Municipality, Nokeng tsa Taemane and Kungwini. After the incorporation of these municipalities, the new City of Tshwane came into effect in May 2011 following the local government elections (COT 2020:8). The consolidation of municipalities is an effort to reduce the number of municipalities in Gauteng to ensure that each municipality is financially viable. Some of the towns, suburbs and townships under the COT include Soshanguve, Akasia, Roodeplaat, Atteridgeville, Bronkhorstspuit, Centurion, Cullinan, Ekangala, Ga-Rankuwa, Hammanskraal, Pretoria East, Irene, Kudube, Mabopane, Mamelodi, Pretoria, Pretoria North, Rayton, Refilwe, Temba and Winterveldt. Pretoria is the capital and seat of government of South Africa, acting as an administrative hub for the country and houses foreign embassies (The Local Government Handbook 2019:89).

The population of the City of Tshwane is approximately 3.31 million people representing 24.1 per cent of Gauteng's population and 5.8 per cent of South Africa's population (COT 2020:11). The COT covers an area of 6 345km<sup>2</sup>, accounts for more than 30 per cent of Gauteng Province's land size and has a population density of approximately 522 per km<sup>2</sup> (COT 2020:11).

Similar to the COJ, in the COT after the local government elections in 2016, a hung council resulted requiring a multi-party government and the political parties represented in Council are shown in **Table 5.2**. The DA led the coalition with the EFF similar to the COJ, but the divergent political positions required robust management to ensure that resolutions were passed in council. Between 2016 and 2019, the COT had two mayoral changes and acting city managers which destabilised the coalition government due to personality differences and allegations of corruption. Changes at the mayoral level and political party representation in Council impact the approval of budgets and projects to be financed through PPPs, as explained in **Section 5.4**.

**Table 5.2: Political party representation in COT Council**

Political party	Number of Seats	% of seats
DA	93	43,5%
ANC	89	41,6%
EFF	25	11,7%
FF+	4	1,9%
ACDP	1	0,5%
COPE	1	0,5%
PAC	1	0,5%
<b>TOTAL</b>	<b>214</b>	<b>100,0%</b>

Source: Independent Electoral Commission (2016).

The disagreements between the DA and the EFF led to the collapse of the coalition government and with no party in majority, the council became dysfunctional (Mudzuli 2019). In March 2020, the COT was subsequently placed under provincial administration through the invoking of Section 139(1)(c) of the Constitution leading to the dissolution of Council. By-elections were scheduled to take place within 3 months but the DA challenged the provincial government intervention in the courts and won the challenge and was accordingly reinstated (COT 2020:9).

Political uncertainty in the COT has implications on its credit rating. The COT's long-term global scale (GSR) issuer rating was downgraded by one notch to Ba2 from Ba1 with a negative outlook (Moody's 2020b). The downgrade is as a result of the weakening liquidity position and poor operating performance exacerbated by the impact of the coronavirus pandemic. The COT's political uncertainty contributed to the downgrade when the DA challenged the provincial government's intervention (Moody's 2020b). Political uncertainty delays approval of budgets and appointment of key administration officials which requires Council's endorsement regarding the political administration of the city.

In terms of its contribution to the economy, the COT accounts for 28.4 per cent of the Gauteng economy and approximately 10 per cent to the national economy of South Africa (COT 2020:16). Given that the COT is the seat of government, the main economic activity is undoubtedly general government, accounting for 28.1 per cent of all economic activity in the COT. The other services sector (finance, insurance, business services) account for 24.7 per cent, manufacturing for 13 per cent, the wholesale and retail trade for 11.9 per cent, transport and storage for 10.3 per cent, with the other sectors contributing the remainder (The Local Government Handbook

2019:89). The COT is home to over 135 foreign missions (embassies) and around 26 other international or regional organisations (COT 2020:17).

The COT houses most research and development institutions accounting for almost 90 per cent of all research activity in South Africa (COT 2020:9). Some of these institutions include Armscor, the Medical Research Council, the Council for Scientific and Industrial Research, the Human Sciences Research Council and educational institutions such as the University of South Africa, the University of Pretoria and the Tshwane University of Technology.

In terms of service delivery, in 2016, the COT had 185 000 informal dwelling units representing 18 per cent of the total households, 146 439 households using pit toilets (representing 14.25 per cent), 231 258 households (22.51 per cent) had piped water inside the yard, and 40 760 households (3.97 per cent) had no formal piped water (COT 2020:29-32). The water services backlog in the COT is defined as households below the acceptable level, and this was estimated at 58 180 in 2016 but this is increasing every year due to migration and expansion of informal dwellings within the city (COT 2020:32).

### **5.2.3 City of Ekurhuleni Metropolitan Municipality (COE)**

The City of Ekurhuleni (COE) is an amalgamation of several councils such as Kyalami Metropolitan and the Eastern Gauteng Services Council, nine small towns and 17 townships. The amalgamation posed the challenge of creating a single unified identity and provides similar service delivery standards between towns, townships and economic centres (COE 2020:20). The COE is the second most populated metro in Gauteng after the City of Johannesburg, with a population of approximately 3.5 million people over a land area size of 1 975km<sup>2</sup> (Gauteng Treasury 2020:24; COE 2020:20). The population density for the COE is around 1 722 persons per km<sup>2</sup>.

Some of the towns and suburbs in the COE include Kempton Park, Tembisa, Katlehong, Alberton, Bedfordview, Tokoza, Benoni, Birchleigh, Boksburg, Clayville, Daveyton, Dunnottar, Edenvale, Geduld, Germiston, Brakpan, Kwa-Thema, Nigel, Olifantsfontein, Springs and Vosloorus. The priority communities for accelerated service delivery are the townships such as Tembisa, Katlehong, Vosloorus, Duduza,

Daveyton and Thokoza, where over 68 per cent of the city's total population resides (COE 2020:20).

The COE is the manufacturing hub of the country and is considered as Africa's first Aerotropolis, with the busiest airport in Africa (OR Tambo International Airport). The manufacturing sector contributes 23 per cent to the city's economy, finance and business services (accounts for 21.3 per cent), community services (approximately 20 per cent), trade (15 per cent) and transport (11 per cent) (The Local Government Handbook 2019:88). The COE contributes around 19.67 per cent to the Gauteng Province's economy and 6.85 per cent to South Africa's gross domestic product (GDP) (COE 2020:28).

Similar to the COJ and the COT, the COE is governed through coalition government between the ANC and the African Independent Congress (AIC), the Pan Africanist Congress (PAC), the Patriotic Alliance (PA) and the Independent Ratepayers Association of South Africa (IRASA) (Sithole 2018). **Table 5.3** shows the political parties represented in the COE council. As explained earlier, the impact of political party representation in Council plays an important role in this study, as PPP projects or funding thereof have to be approved by Council. The impact of political party representation on investment in water infrastructure through PPPs is highlighted in **Section 5.4**.

**Table 5.3: Political party representation in COE Council**

Political party	Number of Seats	% of seats
ANC	109	48,7%
DA	77	34,4%
EFF	25	11,2%
AIC	4	1,8%
IFP	2	0,9%
FF+	2	0,9%
ACDP	1	0,4%
IRASA	1	0,4%
COPE	1	0,4%
PA	1	0,4%
PAC	1	0,4%
<b>TOTAL</b>	<b>224</b>	<b>100,0%</b>

Source: The Local Government Handbook (2019:88).

The City of Ekurhuleni (COE) estimates that it has 324 749 households that require water provision, and this translates to 32 per cent of households in the COE (COE 2018:42). The COE estimates that R10 billion is required to eradicate water backlogs, renew assets and cater for growth of the city over a 30 year horizon (COE 2018:42).

The COE's credit ratings have been downgraded in 2020 due to recurrent operating deficits heightened by the coronavirus. Moody's downgraded the COE and Ekurhuleni Water Care Company (ERWAT) by two notches on the long-term global scale (GSR) issuer rating to Ba3 from Ba1 with a negative outlook (Moody's 2020b). The main reasons cited by Moody's for the downgrade is the decline in cash reserves due to capital expenditure financed from internal sources; the negative impact of the coronavirus pandemic on revenue collection; and the weak liquidity profile (Moody's 2020b). The downgrade increases the debt servicing costs for the COE and these costs may be recouped from residents.

#### **5.2.4 Midvaal Local Municipality (MLM)**

Midvaal Local Municipality (MLM) originated from the split between Meyerton and Vereeniging in 2000. Meyerton was then amalgamated with five other local councils to form Midvaal (Ndlovu 2016:51). MLM is situated in Sedibeng District in Gauteng Province bordering the Free State Province to the south and the Mpumalanga Province to the east. There are a few towns in Midvaal such as Walkerville, Eikenhof, Meyerton and Vaal Marina.

The main economic activities in the MLM area are manufacturing, contributing 25.1 per cent to the local economy, government and community services (22.5 per cent), finance (20.4 per cent), trade (11.4 per cent) and transport (6.1 per cent) (The Local Government Handbook 2019:96).

The population of Midvaal is estimated to be 111 612 and covers an area (land size) of approximately 1 722km<sup>2</sup> (MLM 2020:48-49). MLM has a population density of 65 persons per km<sup>2</sup> as almost half of the land area is predominately in the farming area (MLM 2020:48). MLM is bigger than the City of Johannesburg in terms of land area yet its population is less than 48 times that of Johannesburg. The racial profile for MLM is 58.5 per cent Black African, 39.1 per cent White, 0.8 per cent Asian/Indian

and 1.6 per cent Coloured. The age profile for MLM is 58 per cent youth (0-29 years) and approximately 70 per cent are working age (15-64 years) (MLM 2020:50).

MLM faces some infrastructure challenges with a proportion of the households receiving services below the minimum standard, for example, 10 per cent receive sanitation services and electricity below the minimum standard, and 1 per cent of households receive water below minimum standards (MLM 2020:58). MLM serves two divergent communities, the affluent community and the township community with low income. Infrastructure is well developed in the affluent and predominately White areas due to the historical segregation of apartheid. The municipality has been prioritising development in the township areas to reduce the apparent disparities (MLM 2020:60). MLM faces insufficient funding to expand and deal with infrastructure backlogs and manage its operations. Expenditure growth outpaces revenue generation given the low collection rates in some sections of the municipality. Water leakages, blocked sewers, inadequate road maintenance and internal capacity or skill gaps are some of the challenges facing MLM (MLM 2020:67).

In terms of political management of MLM, the municipality has been under the Democratic Alliance (DA) government since the local government elections in 2000 (Ndlovu 2016:46), and for more than 15 years it was the only municipality in Gauteng Province governed by the DA until the coalition governments in the City of Johannesburg and the City of Tshwane after the 2016 local government elections. The DA controls the council with an outright majority as shown in **Table 5.4**. The stability of the municipal council over time and having an outright majority in Council impacts on the decision to invest in long-term projects through PPPs as explained in **Section 5.4**.

**Table 5.4: Political party representation in Midvaal Municipal Council**

Political party	Number of Seats	% of seats
DA	17	58,6%
ANC	9	31,0%
EFF	2	6,9%
FF+	1	3,4%
<b>TOTAL</b>	<b>29</b>	<b>100,0%</b>

Source: The Local Government Handbook (2019:92).



The next section briefly outlines the research methodology utilised for the empirical study.

### 5.3 Overview of research methodology

This section provides an overview of the research methodology, while the full discussion was articulated in detail in **Section 1.9**. A qualitative case study research methodology was utilised in the study. The use of case study research is progressively a popular research design among qualitative researchers, given its strength of capturing multiple dimensions in a real-life setting and “its focus in individual cases as opposed to methods of inquiry used” (Hyett *et al.* 2014:1-2). Case study research as part of qualitative research provides an in-depth understanding of real-life factors and offers insights that are often difficult to attain with numeric data as data is collected from multiple sources (Yazan 2015:142; Creswell 2013:97; Yin 2013:321).

The interviews were based on non-probability sampling (purposive sampling) of key officials in the selected municipalities, the private sector and government (provincial and national). The interviews were conducted in Gauteng Province from December 2020 to March 2021. Two pilot studies were conducted in order to test the instrument for clarity, question flow and appropriateness of the questions. The pilot interviews provided the researcher with an opportunity to rephrase some of the questions to suit the interviewees’ experience and expertise, whilst at the same time not altering the core themes and sequence of the research instrument.

Convenience or purposive sampling was suitable for this study due to limited funding and time to conduct a randomised study for all of the 257 municipalities in South Africa. In addition, practicality, proximity and easy access to participants were factors considered by the researcher. The researcher is based in Gauteng Province where all of the selected municipalities are located. The study focussed on four Gauteng based municipalities (the City of Johannesburg, the City of Tshwane, the City of Ekurhuleni and Midvaal Municipality). Given the chosen sampling technique, it is difficult to generalise the findings although some insights may be useful for other settings. The researcher received permission from the four municipalities to conduct

interviews with municipal officials. The permission letters from the four municipalities are attached in **Annexure 3**.

A sample size of 31 participants comprising of middle to senior management officials was selected as discussed in **Section 1.9**. The participants included respondents from each of the four municipalities, representatives from National and Provincial Government Departments (National Treasury, the Department of Water and Sanitation, the Department of Cooperative Governance and Traditional Affairs and the Gauteng Provincial Treasury), independent PPP experts and participants from financial institutions as summarised in **Table 5.5**.

**Table 5.5: Interview participants by institution**

Broad stakeholder group	Interviewee group	Interview numbers
Municipalities	City of Johannesburg	3
	City of Ekurhuleni	3
	City of Tshwane	4
	Midvaal Municipality	3
Financial Institutions/ Project Financiers	DBSA	1
	Infrastructure Fund Africa	1
	Rand Merchant Bank	1
	Gauteng Infrastructure Finance Agency	1
National & Provincial Government Departments	National Treasury	5
	Provincial Treasury	1
	Department of Water and Sanitation	3
	Department of Cooperative Governance	1
	South African Local Government Association (SALGA)	1

Broad stakeholder group	Interviewee group	Interview numbers
Private Sector Independent Experts	PPP experts	2
	Water sector specialist	1
<b>Total</b>		<b>31</b>

Source: Researcher's compilation.

The research participants were selected based on their expertise in their respective organisations. The researcher utilised various ways to identify the interviewees including using organisational structures as reflected in annual reports, LinkedIn profiles and a snowball sampling technique. In the City of Tshwane, all research work is coordinated via the Strategy and Organisational Performance Division (Knowledge Management Office). The researcher specified the job titles required for the study and the City of Tshwane provided the individuals relevant to the study based on the research topic. Two participants from the City of Tshwane were identified through the assistance of the Knowledge Management Office. The Knowledge Management Office requests researchers to share the study findings upon completion. Confidentiality in the presentation of the results is therefore difficult and any direct reference to the City of Tshwane in the analysis of the results may incorrectly be ascribed to the individuals identified by the Knowledge Management Office. The researcher therefore aggregated the views and did not directly refer to each of the municipalities considered.

A similar scenario as discussed above arose from the use of a snowball sampling technique. A snowball technique (chain-referral sampling) was used in that the identified research participants provided additional names that the researcher could contact (Sharma 2017:752). Snowball sampling enhanced the responsiveness to the researcher's emails in instances where there was no acknowledgement of the email correspondence and telephone calls. Snowball sampling proved to be effective in municipalities where there was no obvious contact list of participants in which the researcher was interested (Sharma 2017:752). Snowball sampling has a unique disadvantage of introducing bias and unrepresentativeness, given the likely association or social connections of the interviewees (Etikan *et al.* 2016:1). In one of

the municipalities, the researcher was provided with a senior official (executive level) to be the contact person for the study. The senior official was interviewed and provided a list of three (3) additional participants and two of the officials are subordinates of the senior official. Based on public documents, the researcher had identified other contacts within the municipality who would be beneficial to the study and approached them directly. The researcher ended up not utilising the two officials suggested and preferred participants in other divisions of the municipality to achieve representativeness. A similar challenge arose with two national government departments that provided the researcher with three potential participants each. Of the six recommended participants from the two national government departments, the researcher had already contacted two of the participants (one in each department). The researcher only used one participant from the recommended list. The actions by the researcher demonstrate mechanisms to mitigate bias from chain referrals or snowballing.

The mitigation of potential bias from snowballing presented the researcher with a challenge in the presentation of the results. Even though participants' names are not identified, by identifying the institutions, the senior officials who recommended some potential participants may have had some knowledge or could make reasonable inference on the identity of the officials. This was particularly worrying for the researcher as some of the recommended participants were not used in the study and any reference to an institution in the analysis of the results may wrongly be ascribed to the "recommended" participants. Given this predicament, the analysis of the results does not identify each municipality or a specific government department directly, but rather generalises to municipalities, government departments and private sector participants. This approach ensures confidentiality and no specific comments can be linked to a research participant (Kamanzi & Romania 2019:745). Mehmood *et al.* (2016:1824) argue that the nondisclosure of research participants is considered as good research practice given the potential adverse effects of exposing the identity of participants.

Qualitative research involves collection of data from human subjects, hence the participants' rights to confidentiality need to be respected. Participants' rights extend to not responding to specific questions during the interviews, which was also guaranteed. Flick (2015:604) highlights that research ethics, informed consent and

the ethics committee review process are imperative in making research smoother, safer and ensuring that researchers are accountable to the research participants. In light of the above, and to solicit honest feedback, the respondents were assured of confidentiality with respect to their responses. To this end, participants are not identified by name or institution or position held to maintain anonymity. The study received an ethical clearance from the University of Pretoria.

The varied respondent groups allowed the researcher to gather information from multiple dimensions (triangulation). Triangulation makes use of varied information sources even within the qualitative research design (Natow 2020:161; Flick, 2017:53). In this study, interviews were conducted with multiple stakeholders as depicted in **Table 5.5** with slight modifications to the questions, whilst maintaining the broad themes across respondent groups. This approach allowed the researcher to compare perspectives of different respondent groups and therefore provide complementary evidence and enhanced reliability of the findings (Azungah 2018:389; Turner *et al.* 2017:244).

As articulated in **Section 1.9**, interviews were primarily conducted through online platforms (Microsoft Teams). Self-completed questionnaires (SCQs) were utilised as the secondary instrument only in instances where the participants were not available for interviews via online platforms. Document analysis was used as an additional research method because documents were readily available, cost-effective and efficient, and documents are not influenced by the researcher's scope, provide good coverage and are stable (reviews can be repeated over time) (Bowen 2009:31). Document analysis was used to compliment the responses from the interviewees. Where applicable, direct citation is used to present key responses from the participants.

The ensuing section explores the factors influencing the adoption of water infrastructure PPPs based on the responses from the interviews and self-completed questionnaires.

#### **5.4 Factors affecting the adoption of PPPs for water infrastructure projects**

As discussed above, case studies provide detailed descriptions of how and why events occurred (Yin 2014:11; Bhattacharjee 2012:93; Rubin & Rubin 2004:22) and provide a broader contextualisation of the issues under study from multiple

perspectives, multiple participants and utilising multiple levels of analysis (Yin 2014:11; Bhattacharjee 2012:93). In this regard, the analysis of the interviews is done through various themes.

In order to analyse the factors affecting the adoption of PPPs in the four selected municipalities (the four case studies), data collected from interviews was presented and analysed through thematic analysis. Clarke and Braun (2017:297) define thematic analysis as “a method for identifying, analysing and interpreting patterns of meaning (“themes”) within qualitative data.” Thematic analysis has the following advantages: it is “unbounded by theoretical commitments” meaning that it has practical application across diverse theoretical frameworks and research paradigms; it provides simple and logical methods for generating themes and patterns of meaning (Clarke & Braun 2017:297). Thematic analysis is not restricted to just summarising the contents of the data gathered but transcends to the identification and interpretation of key characteristics of the data based on the research objectives and research questions (Braun & Clarke 2012:57). The themes identified from the interviews with participants on the factors affecting adoption of water infrastructure PPPs are presented below.

#### ***5.4.1 Cumbersome regulatory environment***

As discussed in **Section 3.3.2**, regulatory environment and the institutions tasked with implementing and enforcing such PPP regulations should be well defined, to promote effective participation by all stakeholders. The regulatory framework should facilitate private sector participation and rely on existing procurement laws or specific PPP laws (World Bank Group 2015a:11).

The importance of South Africa having a sound and predictable regulatory system was highlighted by almost all participants. One participant praised the municipal PPP regulatory architecture as providing sufficient guidance to both the private and public sector on what they should do when considering municipal PPPs:

“Existing regulation provides guidance on how municipalities should engage with the private sector. The oversight role of the National Treasury in the process provides assurance to the outcomes of the process in meeting public expectations on service delivery and protecting the public from assuming uncalculated risks.”

An international PPP expert with extensive advisory experience across the world indicated that South Africa has a well-defined municipal PPP framework. However, South Africa suffers from poor implementation despite the framework appearing sound. The views are summarised as:

“Often it is easy for a country to create a national PPP law or guidelines like South Africa did, and they were leaders in the world, they were actually ahead of the world in creating this. But if you don’t create the capacity or the technical ability of people in government to implement it, it doesn’t help if you have the greatest laws or the enabling environment as they refer to it”.

The participants were asked to evaluate the effectiveness of the Municipal PPP Regulations in promoting water infrastructure PPP projects. The responses from participants varied widely based on either actual experience with some PPPs or based on perception of the PPP regulations. Approximately 85 per cent of participants from municipalities (11 out of 13) largely described the PPP regulatory environment as highly prescriptive and restrictive, consequently limiting its ability to generate sufficient appetite for municipal water PPP projects. These participants found the PPP regulations to be very cumbersome, rigid and unresponsive to the changing environment. For instance, participants noted that there has not been a formal review process for PPPs for almost twenty years. Municipalities raised some of the problems with National Treasury, but nothing was changed leading to municipalities exploring other funding alternatives, even in instances where PPPs could have been a viable option to fund specific water infrastructure projects.

“It’s quite cumbersome and these are views I’ve shared with the National Treasury before. It’s quite cumbersome, they were developed more than 20 years ago and they haven’t been addressed that much over the years really.”

Another participant with over 30 years’ experience working in the municipal environment, firstly as a municipal official and later as a service provider, finds the Municipal PPP Regulations to be prohibitive. With specific reference to the water sector, the participant observed that after the changes in the Water Act in 1998, some private companies pulled out of South Africa due to uncertainty created by the provisions in the water regulations, which portrayed water as a “nationalised



commodity”. The uncertainty negatively impacted on private sector participation in the water sector:

“The PPP regulations are made to frustrate the process. But there hasn’t been the will in government to, in actual fact, enable private sector participation in the water sector. And that’s – that’s why we disinvested from South Africa in 2002, and our two biggest competitors which were the English and French, also pulled out by 2010.”

Some participants from the private sector (funding side) offered contrary views in relation to PPP regulations. The participants apportioned blame for the slow pace of PPP adoption to factors other than the cumbersome regulatory framework. Almost 75 per cent (3 out of 4) of the funders appeared prepared to follow the process and the PPP regulations or plan around the regulations. Participants highlighted their extensive experience as the key to understand the process and meet the requirements of the regulations. One participant from a financial institution remarked:

“My view is that whatever is happening (slow uptake) has got nothing to do with the regulations. And generally, I think at times, regulations and all these supply chain, or PPP regulations tend to be a scapegoat. I’ve worked on about – right now, probably around five PPPs ... and I can tell you for a fact those that have delayed by three or four years, it has absolutely nothing to do with regulations. It’s got everything to do with decisions that people make, or where they are not listening to advice, or where they think they can do things better in a particular way and it has got absolutely nothing to do with regulations. All these projects that I’ve worked on, we could have finished them within a year. But people always tell you that PPPs take time”.

Another participant from a financial institution called for a thorough assessment of the Municipal PPP Regulations and compared the steps that the private sector utilises to decide on which projects to invest in. In this way, the participant argues, it is the only way to assess whether the Municipal PPP Regulations are restrictive or not. This participant has both private sector project finance experience and public sector experience and has worked on a number of PPP projects. The participant is of the view that PPP regulations are a mechanism for municipalities to justify their business case which is the same process followed in the private sector when one

presents a business case to an investment committee. In addition, there is distinct conflation of the regulations themselves and the subsequent process emanating from the regulations. The subsequent processes are supply chain management processes at the municipal level or Treasury Views and Recommendation (TVR) processes at National Treasury, which may delay the PPP process. The participant's views are summarised by the quotation below:

“So, I'm not of the view, or of the belief, that the legislation is restrictive, as such. The less restrictive you would make it, the more open it would be to corruption .... a less restrictive legislation would just really make large-scale projects open to corruption.”

#### **5.4.2 Treasury's views and recommendations (TVR) process**

As discussed in **Section 4.6.2**, National Treasury plays an active role in PPPs as stipulated in the MFMA. Section 120 of the MFMA and Chapter 8 of the MSA outline the process for municipalities to follow when considering PPPs as an alternative financing option. All participants from municipalities cited delays by National Treasury in providing views and recommendations (TVRs) as a hindrance to the swift consideration of the PPPs. Equally, participants from the private sector expressed disappointment in the slow pace of receiving comments from the National Treasury. Several reasons were cited for the delays which include limited capacity (head count) for officials to deal with an increasing number of PPP projects and no dedicated personnel focussing exclusively on PPPs. Participants indicated that National Treasury staff members dealing with PPPs are also involved in the budget process which also takes a significant amount of time. Participants with insights into National Treasury PPP operations and also some officials within the institution confirmed the limited human resources available to regulate PPPs.

“The directorate responsible for PPP regulation and issuing TVRs has three to four people. So, you can imagine the kind of pressure that the directorate faces on a regular basis.”

The directorate with three to four officials is responsible for the regulation of the entire PPP portfolio in the country. One of the participants highlighted that the directorate has the following functions:

“The directorate regulates all PPPs (municipal, provincial and national government); reviews PPP regulations; champions reforms through research and drafts a chapter on public sector infrastructure in the national budget review.”

The limited capacity has led to delays in the approval process. To amplify the time delays in responding to submissions made, the researcher quotes verbatim from a participant who was involved in four PPP projects in various sectors:

“I think Treasury also takes a bit of time. I think they don't really always coordinate very well. So you've got GTAC, an arm of Treasury that is advising municipalities and at the same time another unit in Treasury approving the projects. I don't think we need to wait for six months, to get a particular Notice to be able to go to the next step”.

To accentuate the issue of time delays at National Treasury, another participant with extensive experience in both the private sector (transaction advisor to a number of PPPs) and the public sector noted the following:

“I can tell you now, if you submit a feasibility study report to National Treasury today, the 18<sup>th</sup> of December 2020, you will get your response from National Treasury in May 2021. That's five months gone. .... what actually leads to delays, or what seems restrictive, is the requirements for approval by Treasury, etc, that actually delay the whole PPPs process, and that's when politicians come back and say, “I'm tired of PPP; it's not giving me anything; I'm not going to be voted in again – I will not even try.”

Almost 69 per cent (9 out of 13) of participants from municipalities were of the view that the various units within the National Treasury operate in silos which also contributes to delays in the TVR process. Similarly, almost 55 per cent (6 out of 11) of participants from national and provincial government share the same sentiments about coordination lapses within the National Treasury. Interestingly, two participants from National Treasury also attested to the need to coordinate their efforts better. Examples cited by municipal respondents include a few instances of incorrect interpretation of the MFMA on the Treasury's Views and Recommendations (TVRs) issued by the Budget Office (acting as the PPP Regulator). The municipalities advanced the view that had the Budget Office consulted with other divisions within National Treasury dealing with MFMA issues on a daily basis, such obvious errors

would not have occurred. Participants from municipalities concluded that the silo mentality within National Treasury contributes to some of the delays. The limited coordination among the various units within National Treasury was captured by one participant:

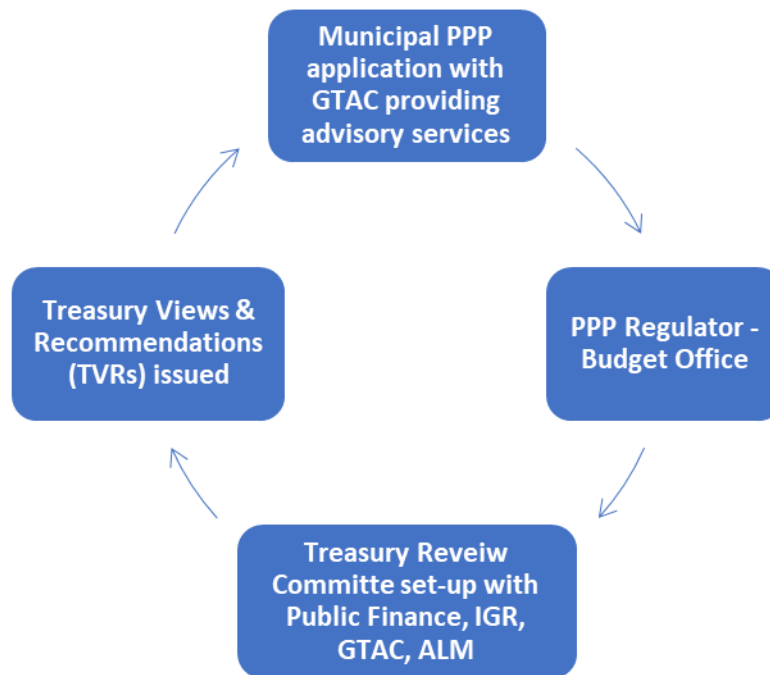
“You know, you’re kind of surprised, because you deal with these entities/municipalities and you know the structural problems and you know that there is no scope for private sector participation whatsoever, but some projects get registered at the PPP office and it goes some way and we only provide our input much later on and it’s always sort of by accident. It’s really problematic, but there is a reform that needs to happen within the Treasury.”

Two participants from National Treasury explained how the PPP applications are considered. When a municipality is ready to proceed with a project proposed to be financed through a PPP, it has to be registered at the GTAC (PPP Unit). The GTAC, among other functions, provides PPP advisory services to public entities and municipalities while the Budget Office acts as the regulator of PPPs. The motivation for the separation of the roles between the GTAC and the Budget Office is the need for independence in decision-making and to remove any potential conflict of interest between advisory and approval roles. The motivation was succinctly explained by a participant as:

“The formulation of the GTAC was to allow or afford National Treasury the independence and the discretion that they need to issue those approvals and Treasury Views. So, GTAC offers advice which is technical assistance, and that on its own, becomes advice to the municipality. The municipality can so decide whether to take it or not to take it. And then Treasury (Budget Office) then issues the views and recommendations – or approvals – and they have the discretion not to take the GTAC’s view, or advice, and issue a totally different approval or disapproval on the particular project.”

Participants with insights into National Treasury’s operations explained the process followed in evaluating PPP projects. A municipality produces a feasibility study (TVR 1 process) and then submits to the PPP Regulator, which is the Budget Office for Treasury views and recommendations (TVR1). The Budget Office then constitutes a Treasury Review Committee to consider the application and invites other divisions in

National Treasury such as Intergovernmental Relations (Local Government Budget Analysis), Asset and Liability Management, Public Finance, the GTAC (PPP Unit/Capital Projects Unit) and Economic Policy, depending on the nature of the proposed transaction. Other experts in other divisions are invited as and when required, depending on the complexity of the project. The various units within National Treasury prepare separate comments and submit to the PPP Regulator for consideration. The regulator then independently considers the submissions and issues the Treasury's views and recommendations on behalf of National Treasury. The same process is followed for some of the outstanding TVR processes. More importantly, the TVR process has no timeframes legislated and National Treasury may take as much time as necessary. This has been a source of complaints raised by participants. The internal National Treasury process is summarised in **Figure 5.2**.



**Figure 5.2: National Treasury's internal process on PPPs**

Source: Researcher's presentation from participant interviews.

Over half of the participants from municipalities highlighted that it is very rare for National Treasury to issue TVRs without changes and sometimes the comments require more than three months to address. The delays in getting comments from the TVR process add to the growing perception of PPPs being onerous. While expressing frustrations about the National Treasury's delays to issue views and

recommendations (TVRs), the participants acknowledged that the respective units within National Treasury require additional manpower if government is committed to tap into private sector funding for infrastructure projects.

As previously stated in **Section 4.6.5**, the GTAC provides advisory services on PPPs to 257 municipalities and around 432 national and provincial government departments and their public entities (Auditor General of South Africa (AGSA) 2020b:79). One participant from National Treasury indicated that the PPP Unit in the GTAC has around 10 officials serving the entire public sector. None of the participants questioned the technical ability of the National Treasury officials dealing with PPPs, but the main concern is manpower (head count) given that the officials have additional roles outside of PPPs such as national budget preparation. The GTAC promotes and offers advisory services to government and participants were of the view that PPP promotion by GTAC is very weak or non-existent, except for the training conducted four times a year. One participant highlighted the following:

“That sort of PPP campaigning and marketing/promotion strategy does not exist over and above the training that the GTAC provides. But you don’t reach out to those ones who might not be aware of the potential of considering PPPs for water infrastructure projects.”

Documentary evidence also suggests the lack of capacity or manpower at the GTAC. For instance, the Financial Fiscal Commission (FFC) noted that the GTAC is doing well in regulating PPPs, but it lacks the resources to promote PPPs and build capacity within municipalities to originate, implement and manage the PPPs (FFC 2017:4). In the 2018/19 financial year, the Technical and Advisory Services Programme (which includes PPP and Capital Projects) had a staff compliment of 38 (GTAC 2019:54), and this is deemed not adequate given the size of the public sector in South Africa. During the 2018/19 financial year, 26 transaction advisory projects were registered with the PPP Unit against a planned target of 17 projects for that year, 33 requests for transaction advisory services were made (against a target of 10) and six capacity building sessions were conducted (GTAC 2019:33). The additional unplanned projects, though required, put pressure on the limited resources in the unit. In addition to processing new projects registered, the PPP Unit is involved in overseeing the implementation and contract management of on-going

infrastructure PPPs and deals with any variations to PPP agreements (GTAC 2019:34).

Participants from the municipalities, despite the concerns with the TVR delays, still perceive PPPs as a valuable funding mechanism for water infrastructure. However, PPPs should not be considered for urgent water projects as articulated below:

“So in my view, PPP, you will use it as a funding source if you are talking about infrastructure that you need for instance in 5 to 10 years from today. Not something that is immediately required.”

### **5.4.3 Politics**

Decisions on which infrastructure financing option is chosen by the municipality is subject to a political process, as the municipal council has to ratify the proposal from the bureaucracy as discussed in **Section 4.5.3**. South Africa’s local government legislation, the MFMA in particular, prescribes that the municipal council approve budgets and integrated development plans (IDP). Section 46 of the MFMA stipulates that long-term borrowing is permitted to finance capital investment/expenditure or re-finance existing long-term debt (FFC 2018:210). Municipal councils determine and approve how infrastructure is going to be financed based on the technical work and recommendations of the bureaucrats. This relationship was aptly captured by the assertions of two participants:

“The city manager aligns with the political head. So for the departments to actually participate in such PPP initiatives, political heads should actually drive it as part of their five-year term.”

“In our municipality we are fortunate that the political leadership supports PPPs. When it comes to service delivery, we have a good political leadership whereby they will support whichever process we want to implement. So, that's actually very important, not just on PPP – on the whole functionality of the municipality.”

The statement above undeniably asserts the influence of political leadership in driving most of the municipal plans, which also extend to the adoption of PPPs. The “limited” political term of office and lack of stability at the local government sphere was cited by over 75 per cent (10 out of 13 participants) of municipal participants as contributing to the slow adoption of water infrastructure related PPPs. The



participants cited that politicians have planning horizons only limited to their term of office, which is five years in South Africa. When politicians come into office, they are perceived as bringing on board “petty projects or flagship projects” as a way of creating a “leadership legacy”. The short-term planning and the pursuit of self-interest by politicians within the term of office exclude projects that require more than five years to execute or accomplish, which is typically the case with water infrastructure projects. One senior participant working closely with political heads asserts the following:

“If there's a change in political leadership like we have experienced before – the new leadership did not see that vision of how PPPs can benefit the municipality and it stops the whole process that was started two/three years back, and money invested on this process was wasted”.

The change in the political environment in one of the municipalities resulted in a water project earmarked for a PPP to be abandoned. This occurred when a transaction advisor was already appointed and the project had to be revived and Council had to approve the funding method which might not have been a PPP as previously envisioned. The participant from the municipality stated the following:

“There was one transaction advisor appointed about two or three years ago, and with the change in politics .... you must remember, we are close to the politics. When the political dispensation changed, that transaction advisor's function came to an end, it was terminated. Then you must start all over convincing the Mayoral Committee that this is the way to go. So we are now trying to resuscitate that appointment or a similar appointment, there will probably be a new transaction advisor”.

Participants also raised the need for a stable political environment for PPP projects to gather momentum. However, the Constitution demands that local government elections occur every five years and the outcome of the elections are not always guaranteed, which adds to uncertainty. As discussed in **Section 5.2**, the 2016 local government elections resulted in coalition governments in the City of Tshwane, the City of Johannesburg and the City of Ekurhuleni. Participants from these municipalities observed that in addition to self-interest motives of politicians in general, further consideration was required to accommodate coalition partners and this ultimately weakened the long-term planning required for successful uptake of

PPPs. The respective coalition partners largely focussed on annual plans which required negotiations and final agreement. Participants provided examples of the role of a stable political environment for PPP uptake by citing some PPPs in eThekweni Metropolitan (waste water), Midvaal (proposed electricity project) and Mbombela (water) which were always under the same political party for a number of years. Two participants observed the following:

“But when you look at municipal PPPs, first and foremost, you need a stable political environment. So, you need the same political party to win, a minimum of three terms, and hopefully the same Mayor, remaining. Because sometimes even if it’s the same party; different Mayor – things change. So, municipalities don’t have long-term planning; they have a new leader every five years. And that for me is the biggest impediment to PPPs. PPPs that have largely been successful are those that have been there in a stable political environment with the same party in charge.”

“Next year (2021) we’ll probably be having local government elections; things might change; the leadership might change, and if a new leadership now comes in, the focus might also change. So, a project that was at an advanced stage might be cancelled, things change.”

Aligned to the observation cited above, a former municipal senior manager (water services department) who has now moved to a funding institution shared his perspectives, which reaffirm the short-term planning horizon linked to the political term. The participant provided an example where long-term infrastructure investment was required as opposed to giving residents water through water tankers on a daily basis. The short-term intervention was purely political and against the advice of the senior officials. When asked to elaborate on the impact of politics on infrastructure investment decisions, the participant noted the following:

“Oh, well, at times some of these things (political decisions) are not logical – and I’ve worked in municipalities (one is part of the case study). Logic is not usually the best rationale for doing things, or prioritising projects. At times, especially if it’s silly season (election season), like this coming one (2021), you can find that you might be having an extensive water tankering programme because it’s convenient for people to do whatever business they want to do as opposed to doing long-term infrastructure investment.

So, at times its those silly things, where people's desire and tactics do not necessarily align with the best way of doing things.”

Another participant from the private sector with funding experience from a number of PPP projects illustrated this point as follows:

“So, in the water sector, the issue for me has not been how restrictive is legislation; the primary issue, for me, what really leads to delays, is the political term of office bearers, it is the greatest impediment to the development of PPP projects. Because political office bearers have a term of five years, after which they know they are out; very few or close to nobody of them are interested in undertaking PPPs because it is deemed long, tedious – they have no experience in it; they don't have the people with the skills in it, and the processes do make it difficult for corruption. As a result, if I am getting into office today, the first thing I'm going to do, is not a PPP, because the people on the ground, I will not be able to tell them in five years' time that I have finished a feasibility study which says, the project will be viable, or I am now negotiating a loan with ABSA – you will not be able to tell people on the ground that. People only believe you have done something well when they see yellow machines on the ground.”

The short-term planning by municipalities linked to the political term of office was identified as one of the limitations in the development of a long-term infrastructure plan required for any possibility of having a pipeline of projects that could be financed through PPPs. Six participants from municipalities highlighted that even the five year infrastructure plan is usually put aside after being approved in preference of ad hoc projects which have visibility from a political perspective. The views from this participant are captured as follows:

“We submit a water service development plan to our Mayoral Committee every 5 years saying what is our requirement for the next 5 years. And then it gets approved and then nothing happens. So when it comes to next budget cycle, we're just back to square one. Our top management in my mind is very operationally focussed and they don't really do long-term planning. They are looking at the issue of the day, 'today the Mayor says you must do XYZ...' And they are just jumping up and down to try and execute what is required today, while they should be focussing on what must we do now to ensure that we're better off in 5 years from now.”

Participants also highlighted that the water sector is always treated sensitively by politicians who always raise reservations of involving private sector participation in the delivery of an essential public good. Eight participants from municipalities emphasised that some of these discussions occurred informally when the municipalities were considering funding options for capital projects in the water services departments.

“There is a general view that water is supposed to be free, and it should not be sold, and if ever you were to do a water project – why does the private sector has to obtain or get profit out of selling a resource that is natural, and that is freely available.”

Politicians are wary of the potential impact on tariffs arising from PPPs given the cost recovery model used by the private sector partner.

“So even if you’re getting the benefits of an improved level of service, I think just the culture in terms of, you know, politicians are concerned about the public backlash in increase in tariffs, that’s been problematic, that’s been I think quite a big stumbling block. And of course a private sector player will not enter the fold if they can’t be assured of their returns.”

The role of politics tends to be subdued in two municipalities where participants observed that politicians are willing to consider PPP projects in the water sector but not as a “big bang” approach. The participants reflected that politicians require projects to be undertaken on a continuous basis whilst big projects are being planned. In other words, if a PPP is being planned to replace old water pipes, in the interim the municipality should use its budget to attend to other water related projects so that there is something to show to the electorate. In addition, in these two municipalities, councillors focus on the projects rather than on the funding mechanism which is left to the municipal officials to recommend the most appropriate mechanism.

“National Treasury has done a good job amongst especially the big metros, to promote PPPs, and politically it has been accepted very well – no question about it. When reports are being taken to Council by the Executive, a lot of the times it’s just a question of approval – “Where do we sign as approval as long as there projects that can be implemented in the interim.”

Politics is often linked to corruption and the water sector was cited by a number of participants. Corruption Watch and the Water Integrity Network (2020:7) note that “the impact of corruption in the water sector is measured in dry taps, lost jobs and polluted rivers.... corruption in the water sector has resulted in deaths.” Corruption manifests both in rural and urbanised areas and takes many forms, for instance, instead of having long-term infrastructure plans, councillors decide to use trucks to distribute water for own benefit. Corruption Watch and the Water Integrity Network (2020:7) note that “construction of a dam to provide water to Gauteng Province has been delayed by years, in part because a minister sought to change procurement rules to benefit her friends.” The documentary shows that there is so much political influence in the water sector and the participants highlighted that these issues deter private sector participation.

Politics play an important role in funding for infrastructure projects at the municipal level, as Council approves the budget and service delivery implementation plan. Municipal council through the Mayoral Committee provides strategic guidance on priority projects based on the election manifesto of the governing party, and therefore the exercise of political influence is a common feature in municipalities. Political interference and acts of corruption across the water sector value chain tarnish the water sector and disincentivise private sector participation.

#### **5.4.4 Influence of labour unions**

The majority of the participants cited experiences of the City of Mbombela Municipality water concession as an example of the fierce opposition by the labour unions to the implementation of water PPP. The opposition resulted in project delays as workers were not certain about their positions. The experience of Mbombela, among others, is always mentioned and influences the politicians’ thinking on water PPPs in their municipalities. Six interviewees from municipalities cited instances where political heads reminded them of the labour unions’ apparent opposition for the Mbombela municipality water concession if similar projects were to be proposed in their respective municipalities. Another participant drew some lessons from a PPP that a municipality considered in the electricity sector and conveyed that workers in that department did not understand the impact of the proposed PPP and this caused anxiety. The labour unions took a particular stance which heightened the anxiety:

“PPPs impact employees, if they are not aware of what the future holds if there is private sector participation. You know any change if not explained, you know, gets people anxious, not knowing very well what will happen to their jobs and so forth. Workers should be made aware of this PPP, how does it work, what are the benefits, both for municipality and for workers to avoid clashes with labour unions, because with labour union buy-in, PPPs will not occur in the municipal space”.

The same views were also expressed by participants from national government who also cited the influence of labour, not only in municipalities, but also across the water sector value chain. One participant summarised the issues with labour as follows:

“And you know, labour has quite a lot of influence around PPPs e.g. the Mbombela case. Labour would always feel sort of threatened that in these processes, they may find themselves without work. And I think even in the case of corporatisation, if I think about the Department of Water and Sanitation who are now thinking about corporatising some of their functions, putting them into a state-owned agency and that is like not even private sector participation. Even that is getting stumped by labour and labour concerns.”

A private sector participant with extensive experience in the sector noted the following:

“We disinvested in South Africa’s water sector primarily because labour saw it (water provision by the private sector) as a threat – a privatisation threat, and a threat to jobs.”

The implication for labour unions’ stance on municipal PPPs is that politicians have to assess the environment first, even if some projects are best delivered by PPPs. This becomes another deterrent effect and adds another layer to the decision-making process. As discussed in **Section 5.2**, the City of Johannesburg, the City of Tshwane and the City of Ekurhuleni are governed through coalitions. Participants in these municipalities contended that coalition governments add another dimension to the decision-making process as political parties to the coalition have different political orientation. Participants noted that the affiliation of some of the political parties to labour unions may result in slow progress in adoption of water PPPs. Any negotiations with labour unions may result in the transfer of employees to the private

partner or some of the employees absorbed in other units of the municipality. The transfer of such employees is governed by Section 197 of the Labour Relations Act of 1995 (Act 66 of 1995) which confirms “all the rights and obligations between the old employer and an employee at the time of the transfer continue in force as if they had been rights and obligations between the new employer and the employee”.

#### **5.4.5 Lack of knowledge and negative perceptions about PPPs**

Participants cited the limited knowledge of PPPs contributing to the negative perceptions and slow uptake of water infrastructure projects. Almost 54 per cent of the participants from municipalities (7 out of 13) highlighted that PPPs are perceived as privatisation, especially by politicians given limited knowledge or just due to their political orientation. Participants highlighted that even in instances where the politicians and some senior municipal officials understand the difference between PPPs and privatisation, the common narrative is that the use of the private sector in the delivery of public services is a clear indication of government failure to provide residents with proper services. In addition, participants identified that there is consistent focus on funding when the discussion for PPPs is made, and the technical or capacity support offered to municipalities is often ignored.

Another dimension of perception articulated by four participants (two from municipalities and two from the private sector) is the race dynamics associated with South Africa’s past. The private sector in South Africa is predominately owned and run by White males and this further creates a perception of the public sector (largely controlled by the Blacks) as a failure. Their views are aptly captured by this participant:

“I think one of the biggest problems South Africa has, is its history with the perception that the private sector is associated with White, and the public sector is mainly Black. That also is one of the issues that impede on, in as much as you are trying to rally private participation, but this perception influences PPP adoption by municipalities which are run by Blacks. Equally, the private sector is worried about public sector corruption.”

Documentary evidence seems to support this perception because in 2019, 66 per cent of the top management in large private companies was White, compared to 15



per cent Black, 10 per cent Indian and 6 per cent Coloured (Commission for Employment Equity 2019:6).

The participants provided a clear link between PPP knowledge or perceptions and its impact on decision-making at municipal level. The limited understanding or negative perception of how PPPs are used to fund infrastructure plays a role in influencing approval of funding decisions by Council. As highlighted above, PPPs in local government involve a political process as evidenced by approvals required at municipal council. The participants all agreed that if political leaders are not keen on PPPs, it is unlikely that there will be any projects considered for funding through PPPs. They expressed a view that the negative perception filters to the bureaucrats who in turn will not explore PPPs as viable alternatives for water infrastructure investment. The vicious cycle of negative views of PPPs will continue until there is a change of leadership or when circumstances force political leaders to consider private sector participation. The following statements capture the views of participants from one of the municipalities and one from the private sector funder:

“PPP is not a well-known thing in the municipal sector. Actually, it’s a ‘swear word’. When I was working for my previous employer (who is part of your case study) we were actually taught that anything that resembles PPP, you mustn’t touch it – run away from it”.

“Like, in all my years in the public sector, I have always known PPP is something to avoid. There has never been a basis for it; it is just something that when you join a municipality, you are told that, “Hey, anything with private sector participation, or that requires Treasury to put their stamp on it, we must avoid – we don’t touch those things.”

The above statements, from one senior municipal official and a former senior official in the water services department (now in the private sector) reveal the extent of the negative perception about PPPs within the respective municipalities.

As a consequence, these officials never explored any PPP project in the water sector officially, though they identified projects which could have been considered under PPPs.

#### **5.4.6 Complexity of PPPs and capacity and skills deficiency**

As discussed in **Section 2.7.1**, traditional public procurement contracts generally do not involve bundled services. Bundling services induces complexity in contracting as the consortium of firms may include firms in the following fields: construction, facility management, finance, legal and engineering, among others (Iossa & Saussier 2018:28). The specific focus for this theme was to determine the skills capacity of the respective municipalities to initiate and implement projects that require PPPs. In this regard, participants provided diverse answers with most municipalities acknowledging limited capacity to both initiate and execute the potential PPP projects. Given the various aspects related to complexity, skills and capacity theme, the analysis and findings are presented using sub-themes to aid interpretation of the findings.

##### **5.4.6.1 Complexity of PPP arrangements**

All participants from municipalities contrasted the requirements of funding a project through PPP to other funding options such as own revenue, grants and long-term borrowing. When the researcher enquired from municipal participants whether the PPP process is significantly different from raising a bond or a loan from a financial institution, participants stated that issuing of bonds or loans requires a generic procurement process and this is estimated to take between four to six months as municipalities have some experience with the process. With respect to municipal PPPs, participants indicated that a municipality has to appoint a transaction advisor to coordinate all the activities related to the project such as feasibility studies. In addition, there are four Treasury Views and Recommendations (TVRs) required before a project is implemented and various skills are required. A participant illustrated the complexity of PPPs using an office accommodation PPP project in the City of Tshwane, which required appointment of a project manager to coordinate the various workstreams. The negotiation process was also complex which resulted in delays.

“The whole thing was started in 2004, and it was completed in 2016 – you can see it was 12 years – and they only took occupation in June 2017. So, you can say, 12 and a half years later.”

#### 5.4.6.2 Training on PPPs

Only 23 per cent (3 out of 13) of the municipal officials interviewed highlighted that they received some form of training on general municipal PPP regulations. The training was offered by National Treasury in collaboration with the Development Bank of Southern Africa (DBSA). Seven per cent (1 out of 13) of the participants from the municipalities also indicated attending one training session on PPPs offered by the World Bank in partnership with New Partnership for Africa's Development (NEPAD). However, the training was considered to be elementary and did not afford attendees practical skills.

Around 77 per cent (10 out of 13) of participants from municipalities were never exposed to formal training on PPPs. Participants from the water services department constituted a bigger proportion of the officials with no basic training on PPPs. One of the participants only understood the PPP process while being part of the bid evaluation committee for another PPP project with which the municipality was involved.

“I was involved in evaluating another PPP tender. So, I have a bit of an insight on the process but ya, I wouldn't say I've had any proper training, which is – I think, it's a gap, because most municipalities don't understand the PPP process including senior people”.

Documentary evidence from the GTAC indicates that a minimum of four PPP training sessions are offered annually (GTAC 2019:33). The DBSA also takes part in the training sessions given their significant exposure to municipal PPPs.

#### 5.4.6.3 Skills

Capacity within the public sector has been identified as an impeding factor in the adoption and subsequent success of PPPs. Interview participants were requested to expand on how “capacity issues” in the public sector manifest. Almost all participants outside of the municipalities pointed to the appointment of less qualified or less experienced people in some of the key roles and high vacancy rates on key positions in the water departments is a hindrance to PPP uptake. Equally, over 90 per cent of participants from municipalities insist that without skills, possibilities for new PPP projects being proposed by infrastructure departments will never exist. Infrastructure

departments (including water departments) within municipalities focus their work plan based on the funds provided from government grants, loans and municipal revenue and are not interested in creating additional work of undertaking feasibility studies for projects to be funded from PPPs. Two senior municipal officials who participated in the interview and were part of PPPs in their respective municipalities remarked:

“We don’t have the skills – you know, full time municipal workers may not have adequate time to look at the demands of a PPP and carry it out fully without any external help. It’s not that they may not know, but the capacity, skills and PPP experience aren’t there”.

“I think the municipality itself, you know, doesn’t have those people who can drive these kind of partnerships (PPPs) and I think we lack in terms of information and skills - we would be very much happy to be engaged in such initiatives and see how best we can utilise the private sector in partnership with us as a municipality going forward”.

Two other participants from municipalities expressed the following:

“And to be honest, we don’t also have the expertise in PPPs, because we haven’t done it before, while the private partner maybe he’s done it before. So we are at a disadvantage in that case.”

“We’re not applying our civil engineering in terms of designs, but we’re just making sure that standards are met and we do things by the book. So our role is more of the oversight, plus making sure the operations or the network produces what it is intended to. The real civil engineering skills are done by external consulting engineers given our limited resources. As a municipality, you know in terms of capacity, that is why we have this panel of consulting engineers within the municipality to assist us because they would be clued up and they are more specialist....so if we need feasibility studies and everything, we can use the consulting engineers....”

Some of the participants especially from outside the municipal environment claimed that the skills shortage is exacerbated by wrong appointments made in key infrastructure departments. The less experienced and less qualified personnel would not want to consider something like PPPs which are complex, as they are not comfortable with their existing roles, let alone adding complexity to their role by having PPPs. A senior engineer with over 20 years in the municipal environment and

who has worked for two municipalities in the case studies mentioned the following in relation to skills:

“My experience is that if you place an advert for an engineer, you will get 200 applications. And then you appoint a person, you will always find a person, but the challenge is to get the right person. And the honest truth... and I can tell you now, the honest truth is that there is a skills shortage in the country and I am not talking numbers. So it all goes back to training being received...”

Around 62 per cent of the participants from municipalities maintained that in addition to less experienced staff, vacant positions (senior, technical staff leaving the municipal space) have not been filled for a few years and this exacerbates the skills deficit. These sentiments were also shared by some of the senior municipal participants:

“We lack skills, in the sense that you don’t have the right people in the right position, most of the time. And other than the politics of it, there's always the vacancy rates that are actually quite high, in a number of places including water and sanitation departments.”

“There is just no project development happening for new PPP projects and that boils down to capacity. If you don’t have the capacity to invest in project development, there’s going to be a slow uptake.”

The researcher queried why training is cited as a problem given that both the private and public sector recruit from the same universities and it seems that the private sector is able to develop and deliver projects on time. Most of the sentiments from municipal participants pointed to the fact that senior positions are approved by Council or at least have some involvement with politics. The sentiments expressed are aptly captured by the following statement:

“In a municipality, recruitment is also about social justice compared to profit motive for the private sector – social justice in this way - we have to employ people and people get employed. So if I am in the private sector, to be quite honest, I mean I don’t care who is this person for as long as they can allow me to make money, I mean I will employ them. So that is the problem that it’s public sector, there are all sorts of considerations including political considerations in the employment of people and that is a challenge”.

Given the vacancy rates in most of the municipalities in the study sample, some municipalities have resorted to using private sector technical experts as opposed to hiring internal staff. Skills are required at municipal level to match the private sector competencies. If a PPP avenue is chosen, for example, undertaking complex negotiations with multiple partners requires an array of diverse skills. A few participants from municipalities claimed the following:

“The skills and experience of the public sector party is important – I always tell people that the private party knows themselves and whatever project you are putting into the market is in the area of their expertise. So, they know the best lawyers, and they know the best accountants, the best tax advisors – in that sector. The municipality doesn't know or have those skills. Therefore, the municipality is now under pressure to always make sure that they have the right skills and capacity on-board.”

Municipalities pointed out that while officials may have the requisite educational qualifications and experience in one form or another, some skills are better acquired while developing and implementing a specific PPP project. For instance, municipalities have functional legal divisions but what is required as part of the PPP process might be specialist commercial law and project finance law experience, among other things. These skills may be transferrable once a municipality is involved in a few PPPs.

As highlighted in **Section 2.7**, the capacity challenges in the public sector including municipal level do not end during the procurement stage, but extend to project implementation and monitoring. The participants cited a few examples where the public sector lacked capacity to monitor the private sector and only corrected this anomaly when there was media outrage about the cost of the specific PPP project and the lack of service delivery. In response to media outrage, the public sector entity employed an independent party to review the work being done by the private partner. This scenario was attributed to lack of monitoring and high staff turnover in the entity, and given the 20 year duration of the contract, a lot of things “fell through the cracks”. One participant's experience is summarised below:

“The client did not know specifically what the private party needed to provide them with in respect of the PPP. And therefore, they were just getting anything – they didn't know the details of the contract – but all of

those things are in the PPP agreement – but nobody has read it because it’s a 500-page document.”

The participants emphasised that capacity and skills should not be viewed in isolation as the implication for poor project monitoring fuels the perception of PPPs being problematic. As discussed above, any negative publicity around PPPs is used by politicians to discredit or frustrate any efforts of pursuing potential projects through PPPs.

Capacity challenges at the municipal level are compounded by high staff turnover even at a senior level, including the accounting officer level (municipal manager). Participants cited organisational instability in some of the municipalities as a concern, for instance, in the City of Tshwane there were three municipal managers within a period of five years.

“So, one day you have this municipal manager, the next thing he is gone, another one comes – the next thing he's gone. So, you have quite a number of people who rotate and as you know, with the PPP, it takes a bit of time to conclude the process. So, you end up having multiple people who are coming in and out of the process, and eventually the project never really happens, because of frequent changes. Somebody new comes in and he thinks well, he’s got other ideas, even though the feasibility study has proven that a PPP is the best way to go.”

#### **5.4.7 Time lag at procurement of advisors**

As discussed in **Section 4.6.2**, the Municipal PPP Regulations identify four stages for a municipal partnership to be established, namely “inception, feasibility study, procurement and PPP contract management”. The complexity of PPPs arises from multiple factors such as the procurement process, contracting, the negotiation process and project implementation, among others (Boyer & Newcomer 2015:130).

If a municipality decides that a project will be implemented as a PPP, the municipality must appoint an internal or external project officer depending on its capacity (National Treasury 2005:6). Given the specialist skills required, over 75 per cent of all participants indicated that municipalities struggle to appoint the right people, as they may not be fully conversant with the specific skills required for the



chosen project. Appointment of less qualified people results in delays in the project, therefore making PPPs appear overly complex, yet some of the decisions made at municipal level are questionable. The participants characterised this problem in the following way:

“Municipalities are not able to procure the right people to do the feasibility studies, because they don’t know what they’re looking for – they haven’t done a PPP before – you are writing a Terms of Reference on something for the first time. So, that in itself becomes a challenge. Because once you have the wrong people, then the project will take long, et cetera, et cetera, all right.”

The challenges faced by another municipality (Midvaal) in the procurement of transaction advisors resulted in the termination of the first mandate and re-appointing another advisor with the assistance of an external party, as they had not implemented a PPP before. The PPP in question was in the electricity sector but a participant from a funding institution indicated that this is not unique to this municipality but common across several municipalities including some of the metros in Gauteng. Two participants summarised the problem as follows:

“I think we have a second transaction advisor on the Midvaal project – the first guy who did the study for whatever reasons, it was terminated, then we had to get new guys who had to redo the work of the previous one.”

“I’ve already mentioned there was a transaction advisor appointed for one of the water projects and it was terminated. Another project was earmarked for PPPs and was supposed to go to our MAYCO, but a transaction advisor was never appointed until there was a change in the politics.”

#### **5.4.8 Expensive compared to other funding options**

About 77 per cent of the participants from municipalities (10 out of 13) cited the high costs associated with PPPs as disincentivising their rapid adoption. Participants highlighted that PPP projects require upfront costs for pilot studies, pre-feasibility and feasibility studies, appointment of external advisors and other technical skills at the inception stage. A participant from one of the municipalities estimated that these

costs may be between R30 million to R50 million for the entire process depending on the size and complexity of the project.

“The city is very welcoming of PPPs, but PPPs take very long to conclude, and you require experts. Sometimes, you really need to employ project managers on a full time basis who have full dedication to the project and not rely on municipal officials who have other duties. So, if you don’t have full resources that really are doing the work, it’s going to take you forever. So, you need a budget in place to go and hire consultants.”

If a municipality considers undertaking multiple projects through PPPs, given the transaction costs, it may be prohibitive.

#### **5.4.9 Water sector not attractive for private sector investment**

This theme sought to determine whether participants believe that private sector investment in the water sector could be profitable from the private sector’s perspective. The question was posed to all participants (private sector, municipalities, government departments) and the views were varied. Sixty-one per cent of all the participants (19 out of 31) described how it is difficult to make water investments profitable at local government sphere due to a number of reasons, some already explained above (politics and lack of skills), and others are explained below. Thirty-nine per cent of the participants (12 out of 31) argued that there are specific scenarios where water sector investments could be profitable. These views are expanded upon below.

The profitability of the water sector has been questionable, based on the perspective of several participants. Private sector participants explained that investment decisions are based on expected returns of each project, irrespective of the sector. The participants emphasised that different sectors of the economy compete for private sector investment and the characteristics of each sector inform investment decisions. In this regard, there are features of the water sector which reduce its attractiveness for private sector investment. For example, water is a basic right articulated in the Bill of Rights in the Constitution of South Africa. Consequently, this constitutional imperative imposes an obligation on municipalities to provide free basic water, even to residents that cannot pay. Free basic water is currently a

minimum of six kilolitres per month per household and any usage exceeding this amount attracts a tariff. Section 3(1) of the Water Services Act (Act 108 of 1997) asserts the “right of access to basic water supply and basic sanitation to all citizens.” The critical issue with water, as argued by a number of participants, is that it is difficult to implement strict credit control in the case of non-payment of the water tariffs. Consequently, this disincentivises private sector participation. Two participants from the municipalities summarised this problem as follows:

“Water is one key trading service that municipalities cannot use to penalise residents for non-payment, like they can do with electricity. A municipality can use electricity to coerce your customers to pay for other services but for water you cannot even restrict the water when there is no payment. This has contributed to the terrible culture of non-payment for water.”

“And most of our water projects are social projects, I mean if you look at a project where you are providing RDP houses, for example, it’s a social project. If you were to invest money into such a project, you would be lucky to get your money in 10 years, 20 years, you may not even get the money. In fact, we have done an analysis of some of the projects where we were possibly looking at bringing in private partners. Out of the 17 projects, only 3 were financially viable which could be funded through PPP arrangement. A municipality is not like a private company where you basically look at the bottom line and say, “Okay will I be able to make money?”

Other participants argued that there is a silver line provided by private sector participation and the enforcement of credit control policies, even in the water sector. Participants argued that the private sector might be insulated from political influence and therefore able to at least collect water tariffs despite water being considered as a constitutional right.

“It might be a bit difficult for municipalities to exercise credit control due to political considerations, but a PPP arrangement for water provision will remove the responsibility from the municipality and then allow for a private player that would be more comfortable with enforcing credit control measures.”

While the provision of the free basic water was justified in the quest of the country to deal with water imbalance between racial groups from apartheid, unintended

consequences from a communication point of view ensued. One participant with over 40 years in the water sector had this to say:

“Water was nationalised in 1998, through the Water Act. So, what that did is that unfortunately, as a consequence, it gave the impression to government and to society that water is your God-given right, and for free. Free water, you can't invest in it and the private sector would be hesitant.”

In addition to the constitutional obligations, tariff determination for water services is the responsibility of the respective municipality, and the municipal council has to approve the tariff level and this limits the influence of the potential private sector partner to achieve full cost recovery tariffs.

“The private sector does not control the tariffs, irrespective of the demand. The tariffs are set centrally by the municipality. So, I can't just charge whatever I want, simply because it costs me more to get you water. The same party (municipality) that needs the water, is the same party that must set the tariffs. So, it's a difficult market, where you are selling a product to a person that's setting the price [laughs] then it can't be profitable. There's also a history of municipalities under-recovering water costs.”

Participants provided a number of examples in developing countries cementing the view that water is a public good, provided either for free or at a tariff that is not cost reflective. According to the participants, this is a common feature in most developing countries, yet there are success stories in other countries that implemented PPPs. When asked whether the municipal water sector in South Africa is attractive for private sector investment, some extracts of the responses from participants are presented below:

“No, the water sector is not attractive to the private sector, because it doesn't have high profits; the returns are low, okay. Unlike the Energy Sector, like the Independent Power Producer (IPP) office has attracted investment in excess of R250-billion; you won't do that in the water sector. Simply for one thing, because the constitution says that water is a right for every South African. Now, you come to municipalities, you get free basic water even for households that can pay.”

“We disinvested from South Africa in 2002, and our two biggest competitors which were the English and French, also pulled out by 2010. Because we

saw that water and sanitation was not investable. So, it was primarily driven by government, where labour saw it as a threat – a privatisation threat, and a threat on jobs.”

Participants were further asked to explain why cost recovery water tariffs are difficult to achieve and almost all the responses pointed to political pressure as some of the municipal services are used as a campaigning tool.

“So, the problem there becomes the fact that tariffs will not be cost reflective. Municipalities will give concessions as and when they see fit, particularly most of the time towards local government elections and if you want to see what I am talking about, you can search for a decision that was taken for example by the Minister of Water and Sanitation. The decision was not to increase the tariffs of waterboards, I think for the 2021/22 financial year, just because ... she was talking about issues of COVID 19, however when you look at it, this is particularly because we are going for local government elections.”

Other participants highlighted that potable water within a municipality is largely used by industries, affluent residential areas and government entities, with less water going to poor areas. From these assertions, it appears that water services may achieve cost recovery if distributed largely to paying customers. The assertions by the participants were supported by documentary evidence reviewed. For instance, Johannesburg Water, an entity of the City of Johannesburg, achieved a net operating surplus of R1.75 billion (including water and sanitation services) in the 2018/19 financial year (Johannesburg Water 2020:15). The positive net operating surplus indicates that water can be a profitable venture which the private sector may be able to invest in and derive returns on its investment.

To support the above views the following statements from participants present the picture:

“I think there are certain aspects in the water value chain that are profitable. Yes, water has got a heavy social component, but if you look at it – a huge percentage goes to industry; affluent areas; a huge percentage goes to people who can actually pay for those services...”

“So it’s very clear, you need to be creative, at least to make water services profitable. On its own, its unlikely to be profitable”.

Four participants from the private sector suggested that there are mechanisms that can be put in place to improve the attractiveness of the water sector. An example cited was the use of government guarantees to cushion the municipal payments, given that the municipalities are facing financial challenges exacerbated by the poor economic performance (COVID-19 pandemic playing a role) and high rates of unemployment leading to shrinking revenue. To make water PPPs viable for the private sector, large users of water should sign long-term off-take agreements to guarantee the financial sustainability of the project:

“Most municipalities are not financially viable, with very limited revenue collection ability. In addition to this, much of the water (41 per cent) is lost either through technical losses or commercial losses (due to non-payment). As a result (and in the absence of commercial water off-take agreements) most private developers and financiers tend to shy away from municipal water PPPs, unless these are supported by a strong private off-taker (large, private sector water consumer), supported by central government guarantees.”

To improve the attractiveness of the municipal water PPP projects, participants identified that the structuring of the PPP agreement should consider both demand and supply side inefficiencies, that is, the scope of any municipal water PPP project should firstly address non-revenue water (water losses) and improve the collection levels for water. This double-pronged approach will ensure that the water service function is profitable, as more water gets to the residents due to reduced water losses and this will ultimately lead to increased water being billed which makes the project viable for a private sector investor.

Furthermore, three participants were emphatic in their view that municipalities should acknowledge that water PPPs are not attractive to the private sector and therefore make financial provision to pay any subsequent shortfalls from municipal own revenue or grants from national government. This requires a blended financial structure that acknowledges this eventuality, rather than trying to make unrealistic assumptions which will discourage the private sector partners. Examples cited by participants include the Gautrain PPP where the private sector consortium receives a Patronage Guarantee Grant (Ridership Guarantee) to cater for the revenue shortfall as a result of low ridership.

“As a result, most water sector PPPs are considered not to be profitable, unless there is a government instrument (viability gap cover) to subsidise the concessional portion.....The financing may be structured with concessional loans blended with commercial loans, where the concessional element grants and affordable loans will compensate for the lower tariff payers. In that manner, water PPPs can be profitable.”

Two participants from the financial sector with exposure in the African continent described the change in their investment philosophy in the water sector to make it profitable or worthwhile for investment. One of the options utilised in other countries is the pooling of funding for a number of municipalities (syndication) to make the deal substantial and spread the risk among the various municipalities. The two participants argued that this approach brings about economies of scale, lower costs in the long run and guarantees positive investor returns.

#### ***5.4.10 Lack of independent water economic regulation***

Almost 84 per cent of participants (26 out of 31) from the private sector, funding institutions and the government sector highlighted the opaque regulatory framework in the water sector as an impediment to PPPs. Furthermore, lack of independence in the water institutions and the expansive powers vested in the Minister of Human Settlements, Water and Sanitation lead to conflict of interest as the Department of Water and Sanitation (DWS) is the sector leader, policy maker, supporter, regulator and bulk water provider, among others. The participants contend that the DWS is ineffective as it acts as a referee and a player with no independent oversight in the entire value chain. Almost half of the participants (15 out of 31) strongly described the role of the DWS and the overall regulatory environment as “structurally deficient” and marred with “chronic conflict of interest”. These participants indicated that this deficiency limits private sector participation across the value chain and more specifically at municipal level, which is also tainted by an unstable political environment. The challenges facing the DWS given its multiple roles in the water sector were aptly captured by a participant with insights into the department:

“When there is a failure in the water sector value chain or a political ‘hot potato’, if I may call it that, the first mode that the department switches on is what can we do to fix this as the sector leader. When the issue involves



municipalities, the department switches on to “how do we support these municipalities?” Now regulation is being seen as the big stick that needs to allow the support to go through first and we regulate later. Some of the interventions required to fix the issues are regulatory, but the Department takes a different approach given its role as sector leader.”

The participants maintain that the lack of independence is shown by the role of the DWS across the value chain – setting a bulk abstraction tariff for water sold to water boards; the water boards report to the Minister and the water boards sell water to municipalities and the tariff is not regulated. In addition, the municipalities add a mark-up and distribute to residents and there is no independent oversight on these tariffs. The criticism of the DWS for not actively advocating and moving towards establishing the independent regulator impacts on the efficiencies of the entire water sector.

Participants argued that water features (being a public good and mandated access by national legislation) are common across the world and therefore should not be used to justify any shortcomings in the sector. The participants underscored the centrality of institutional and regulatory environment in the water sector as an essential component to attract private sector investment. One of the important interventions within the regulatory environment cited by participants is the independent water economic regulator. The participants stressed that an independent water economic regulator mitigates the political influence associated with tariff determination. An example cited is the instruction issued to Water Boards by the Minister of Human Settlements, Water and Sanitation not to increase water tariffs to municipalities despite escalating costs:

“... a decision that was taken for example by the Minister of Water and Sanitation. The decision was not to increase the tariffs of waterboards, I think for the 2021/22 financial year.....”

Participants highlighted that the current tariff determination framework is largely unscientific with no predetermined methodology, resulting in most parts of the water value chain charging tariffs that do not cover the cost of providing such a service. In addition, participants described the self-regulation by municipal council on water tariffs as being problematic in that councillors are politicians who consider a lot of

factors before deciding on tariffs. One such consideration is the desire to have low water tariffs as a campaigning tool.

The current regulatory regime in the DWS considers both economic and social regulation, that is, affordability and sustainability. Almost 52 per cent (16 out of 31) of the participants argued that politicians at municipal level ascribe more weight to social regulation (affordability), especially towards elections to enhance their chance for re-election. A private sector water expert summarised the issue as:

“The water sector is not regulated and government argues with us and says it is. And then we drill down to it, they agree with me, it isn't. So, it needs to be regulated, right through the value chain. Now, the producer of bulk water in South Africa is National Government – the Department of Water and Sanitation; it can't regulate water-use licences; it can't regulate the quality of water, and there's no periodic blue and green drop-reports. So, it has failed. And that's why we need an independent regulator because the private sector will not invest unless there's an independent arbiter of the price, at least, of water and the water-use licenses.”

Insights from five participants close to the DWS confirm that the regulatory functions are not distinguishable from management decisions of the department, which also consider the political environment. These five participants confirmed that approvals that would ordinarily be issued by the economic regulation chief directorate in the DWS are always signed by the Director General (DG) who is the head of the department or Deputy Director General (DDG), which is more indicative of management decisions of the department as opposed to economic regulation decisions:

“The decisions of the economic regulator are not communicated as the regulator but as the department. The economic regulation unit does not sign any instruction or any notice of authority. The DG of the department or the Minister or the DDG issue directives or instructions and just imagine their consideration – more political than anything else”.

Further examples of the “dysfunctional regulatory regime” as argued by some of the participants, necessitated by the lack of independent regulation in the water sector, are captured below:

“Eskom (electricity supplier) can take NERSA (regulator) to court, you could never see something like that happening with the water sector, because the regulator is the boss of the institution. So why would water boards or a municipality want to take the department to court if they are not happy, that would be just be pure suicide. So you want a situation where the system matures well enough to a point where a water board will feel so aggrieved by the regulator that they can take the regulator to court, because the regulator is independent from the actual value chain.”

As discussed in **Section 3.3.3**, independent economic regulation brings coherence, predictability, credibility, legitimacy and accountability, which is essential for private sector participation in water infrastructure projects (Ehrhardt *et al.* 2007:9). This observation was supported by one participant who highlighted that:

“Everywhere you’ve had, you know, a strong independent regulator and where you’ve got transparency on how tariffs are set and some predictability, you know, that’s been a better environment for private sector participation than without”.

The researcher queried why the independent water regulator has not been put in place, despite the need having been identified over a decade ago by the Department of Water and Sanitation. Nine participants identified the vested interests by politicians contributing to the lack of movement on independent regulation. The self-interest manifests in two ways as articulated by the participants. Firstly, the loss of political power over institutions that are currently under the direct control of the Minister, which would in the future account for its decisions to the independent regulator.

“There is also no political will to let go of the water function in terms of regulation because perhaps it is also a sense that people are giving away power. It is also a campaigning tool for votes in a sense, that we are giving you access to clean water and so forth, so if you let go of that function, you might not be seen to be as powerful as you can...”

Secondly, participants argue that the opaque regulatory environment in the water sector is conducive for politicians to exercise undue pressure on water institutions and breeds a fertile ground for corruption. These views are captured by the words of a participant as follows:

“Because an independent regulator stops the gravy train and so, it doesn't serve the political agenda... So, I speak to a lot of people, and some senior people within National Government – nobody really disagrees with it; it's a matter of how does it affect the politics. And also, it 'cleans up the act', you know, and 'cleaning up our act', there are people who have the agendas to satisfy, and they're not going to let go very easily”.

Participants with deep insights into the DWS and who were at some stage involved with the envisaged establishment of the independent water regulator confirmed that the slow progress is political and nothing else. When the researcher quizzed the participants as to why there has been slow progress, and about the frequent changes to the proposed name of the water regulator based on the DWS 2020/21 budget vote, the participants answered as follows:

“It was just one of those delaying tactics to be seen like we are doing something and yet we are not doing anything. Unfortunately, the Minister who came with that name did not even last a year and a half in the department. So when the new management came, that new name went underground, they were like... “No, no, no. We are still deciding on this regulator. You can't force it down our throats.”

“There is fear to lose or to let it go, to let the regulation component go and be independent. Why? Because there are lots of things that are not done correctly that require regulatory decisions and when you are internal, the regulatory decisions are suppressed to be management decisions to address whatever challenges that might be there”.

Six participants from national government including the DWS argued that independent regulation while necessary has to consider social regulation given the status of water as a public good as enshrined in the Constitution. Attributes of social regulation include achieving social objectives in relation to access to water for all citizens and not only cost recovery, which is the primary tenant of economic regulation.

In addition to politics, participants also highlighted the limited capacity and economic regulation skills within the DWS as contributing to the slow movement in establishing the independent regulator. Participants argued that the economic and accounting skills required to undertake economic regulation are currently not in the DWS.

“We know that most of the expertise that will go to establish an independent regulator will be coming from the DWS itself and the DWS is not largely capacitated around economists and accountants to be able to regulate objectively, so you still need to capacitate this institution.”

The debate on the appropriate institutional set-up of the independent regulator has contributed to the stalling of the process of establishing one. On the institutional structure, the debate is whether the economic regulator should be housed outside of the DWS and yet reporting to DWS, or whether it should be a directorate in the DWS or be located outside of the DWS and reporting to Parliament. South Africa has an established framework for economic regulation in other sectors and participants characterised the debate in the water sector as being marred by self-interest objectives of politicians. One participant from national government is of the view that the debate is self-serving, as it stalls the process yet the water sector may draw lessons from electricity regulation by NERSA. Private sector participants reaffirmed their disapproval of the economic regulator to continue to be located in the DWS, as it deters private sector investment:

“If the regulator remains in the DWS, it does not create policy certainty around whether that regulator will be independent or not. So, at the whims of the Minister who is there, they decide what the tariffs should be, but in essence a regulator should be using the scientific tools that you and I spoke about to benchmark efficiency of operations for them to be directed towards proper pricing. So, having this regulator internally, also does not inspire confidence in terms of its administrative efficiency as well. So, these regulatory bottlenecks that we have, they are actually, if you like, a turnoff for private sector companies to be able to come on board and invest in the water sector.”

#### **5.4.11 Summary of the factors affecting municipal PPP adoption**

The impediments to the adoption of PPPs in the water infrastructure sector are varied from a cumbersome regulatory environment, political influence, and lack of skills and complexity of PPPs, among others. The cumulative effect of limited resources at the GTAC, lack of skills at municipal level and the cumbersome regulatory framework delay the implementation of PPPs. Documentary evidence of

the time taken from inception to financial closure of various PPPs at national and provincial government varied from 14 to 80 months, with average duration being 30 months as reflected in **Table 5.6**. The duration in South Africa differs considerably from Canada, with an average of 18.2 months from 160 PPP projects (Casady *et al.* 2019:1264).

**Table 5.6: Duration from inception to financial closure - selected PPP projects**

Project name	Project number	Inception to financial close
Inkosi Albert Luthuli Hospital	P005	14
Chapman's Peak Drive Toll Road	P004	28
State Vaccine Institute	N002	32
Humansdorp District Municipality	P019	15
Fleet Management - Eastern Cape Dept of Transport	P031	27
Head Office Accommodation- Department of Trade & Industry	N007	36
Cradle of Humankind Interpretation Centre Complex	P021	24
Social Grant Payment System - Free State Dept of Social Dev	P043	27
Gautrain Rapid Rail Link	P007	69
Fleet Management - National Dept of Transport	N070	33
Western Cape Rehabilitation Centre & Lentegeur Hospital	P051	47
Polokwane Hospital Renal Dialysis	P066	30
Dept. of Education Head Office Accommodation	N008	80
Eastern Cape Dept of Health, Port Alfred & Settlers Hospital	P057	46
WCNCB - De Hoop	PE011	70
<b>Average length of time</b>		<b>39</b>

Source: Adapted from Ngamlana 2009:58.

Despite the various reasons advanced by the participants, the researcher also sought to establish whether municipalities still considered PPPs as being an alternative funding source. The next section consolidates the participants' views on PPPs in the water sector.

## 5.5 Municipalities views on other matters related to PPPs

All of the participants from the four municipalities broadly acknowledged that there are water infrastructure challenges at their respective municipalities. Water infrastructure backlogs, maintenance backlogs, replacement of asbestos/cement water pipes and other aging infrastructure were cited as requiring urgent attention. The question then was to establish whether PPPs are considered as an effective

way of dealing with the water infrastructure backlogs, and also assess the readiness of the municipalities to adopt water PPPs.

### ***5.5.1 Municipal PPPs as an effective way of addressing water infrastructure challenges.***

Participants from the four municipalities highlighted that a significant portion of the water infrastructure in the four municipalities is over 40 to 50 years old and requires urgent replacement. The funding required to deal with backlogs and replacement of water pipes varied per municipality from R1 billion to R9 billion annually. With current funding levels in the municipalities, eradication of the aging infrastructure will take between 20 to 30 years, and at the same time investment in repair and maintenance will be required. One participant described the current efforts by the municipality as:

“In other words, given the backlogs, it is replacement that should have happened 2, 3, 4, 5 years ago and so basically what we are simply doing now is we are patching up the infrastructure which was supposed to have been replaced years ago - because that infrastructure is overdue for replacement”.

Given these backlogs and infrastructure deficits, the theme sought to establish whether the participants identify any potential role of private sector participation in addressing water infrastructure deficits. The participants were asked to describe the potential role of private sector participation in water infrastructure financing. In this regard, the emerging views are summarised and where appropriate direct verbatim quotes of participants are presented. Documentary analysis and review (where applicable) was used to support the assertions made by the participants.

Almost all of the participants from municipalities (12 out of 13) supported the notion of using PPPs to address water infrastructure deficits (infrastructure backlogs, maintenance backlogs and investment in new infrastructure). The same views were expressed by other participants who identified the need for alternative funding for water infrastructure through PPPs. The need for PPPs in the water sector has been heightened by the impact of the COVID-19 pandemic which negatively impacted both the municipal own revenue and government grant funding. Two participants from the municipalities noted the following:



“PPPs form part of alternative financing instruments and are important, especially during this period because what COVID-19 has done - it has obliterated municipal liquidity positions and balance sheet positions and municipalities will struggle in the medium term to consider debt financing.”

“So, I definitely think there is potential for PPPs in the water infrastructure space, considering the fact that there is significant infrastructure backlog across South Africa and in our municipality. Also, considering that our fiscal framework is constrained; this would definitely be a viable option across South Africa and also in our city”.

“The water infrastructure challenge is getting bigger and bigger, but our resources stay the same. So water and sanitation should get at least 40 per cent of the capital (capex) budget and we are getting about 12 per cent of the capex budget. So private sector participation has a role.”

Participants noted the fiscal challenges facing South Africa exacerbated by the Covid-19 pandemic, creating an opportunity for government to revise the PPP regulations and make it less cumbersome for the private sector to participate:

“Through the public private participation – the Presidency has agreed that not only are we bankrupt, but we need private sector participation”.

The assertions above are also supported by documentary evidence. The South African Economic Reconstruction and Recovery Plan launched in October 2020 highlights the severity of the negative economic outlook for South Africa resulting in resource mobilisation constraints due to low levels of growth, under collection of taxes, a rising budget deficit and increasing debt limiting the ability of government to increase funding for infrastructure (The Presidency 2020:2).

One participant was sceptical about the benefit of using PPPs for water infrastructure, given the sensitivity of water services in the broader political context, but acknowledged that the private sector has been used by the municipality to design and implement some of the water projects (although behind the scenes). This point is expanded upon in Section 5.4.3 above.

Participants expressed overwhelming support for PPPs as an alternative funding mechanism for water infrastructure even before the COVID-19 pandemic. This

observation reaffirms the objective of the study, which is to assess why there is limited use of municipal PPPs for water infrastructure projects, yet there is a recognition that PPPs form part of the funding mix available to municipalities.

### ***5.5.2 Municipalities' readiness to adopt water infrastructure PPPs***

This theme sought to determine the extent of readiness by the four municipalities in the sample to support water infrastructure delivery through PPPs. The participants were asked whether there is general support within the municipalities of using PPPs to finance water infrastructure projects. Furthermore, the participants were asked to provide some examples to support their view. Restating the exact words used by participants for emphasis, the analysis reflects the prevalent views and thoughts of the interviewees.

The findings indicate that currently all of the municipalities are utilising government grants, loans and own revenue for water infrastructure investment. No PPP projects for water infrastructure have been actively pursued. When the researcher quizzed the participants on the readiness to embrace PPPs, the findings show some consensus of the need for water infrastructure investment through PPPs, given its potential to contribute additional expertise. Participants also indicated that PPPs in the water sector were considered, but due to urgency of some of the projects as part of the municipal integrated development plan (IDP), loans and grants were preferred instead of PPPs.

“PPP’s, in their very nature have a long lead time from project inception through to conclusion. And the project in question was very urgent and it was something which could be funded on balance sheet. So given the pressing nature of putting that infrastructure in place, the decision was made to fund it on balance sheet as opposed to off balance sheet. But it’s things that we do keep in mind and when an opportunity arises, we will apply our minds accordingly.”

The readiness of municipalities to work with the private sector is borne out from its effectiveness in the delivery of projects on time, given the skills and superior procurement methods followed. Almost all participants from municipalities (12 out

13) recognised the efficiency of the private sector, which makes working on water projects likely to be beneficial. One participant noted the following:

“The private sector, if they ever come forth with a PPP, it will work fast as they have efficient procurement processes and can tap into new technology quicker than municipalities who still have to go to tender for almost everything”.

The sentiment of increased municipal collaboration with the private sector was supported by documentary evidence reviewed. For instance, the City of Ekurhuleni indicates increased interaction with the private sector occasioned by the recent partnership with the National Business Initiative to deliver foot-operated hand washing machines to combat the spread of the coronavirus (National Business Initiative 2020). While such projects may be considered small, the realisation of potential value of private sector participation may lead to development of large water infrastructure projects in the future.

### ***5.5.3 Measures put in place to support PPPs in water infrastructure***

This theme sought to assess whether municipalities are taking any pro-active steps or measures internally to advance PPPs. A deliberate focus on PPPs was envisaged to be a vehicle to promote the adoption of PPPs, or at least identify long-term infrastructure projects that could potentially be funded via PPPs. Only one municipality had a plan to launch a PPP unit within its Treasury function as a way to proactively identify projects that could be considered through PPPs. Another municipality is establishing a Specialised Finance Directorate where PPPs will be housed. In addition, another municipality with the assistance of the DBSA is proposing establishing a project office to develop 10 - 20 year long infrastructure projects.

“So the reason why we’re launching the PPP unit is to have a dedicated function which will develop PPP projects within the city, have one point of accountability, make sure that it is adequately staffed, with sufficient seniority to then run around with the different departments and entities and look at all the different infrastructure needs, particularly those that aren’t funded.”

The two other municipalities in the sample did not have any pro-active measures in place to promote PPPs, except to rely on public pronouncements by politicians, especially the President of South Africa, who indicated that private sector participation is crucial for infrastructure development (The Presidency 2020:2).

## **5.6 Conclusion**

This chapter explored the factors influencing the adoption of water infrastructure PPPs in the selected municipalities. Firstly, the chapter outlined the background of Gauteng Province and the brief profile of each of the selected municipalities to assist in contextualising the respective case studies. Secondly, the chapter summarised the research methodology to position the discussion in this chapter. Thirdly, the chapter explored the factors influencing the adoption of water infrastructure PPPs based on the responses from the interviews and self-completed questionnaires. Participants stated several factors in municipalities that impede water infrastructure PPP adoption. The factors identified by the participants are both internal to the municipal environment and other external factors within the water sector.

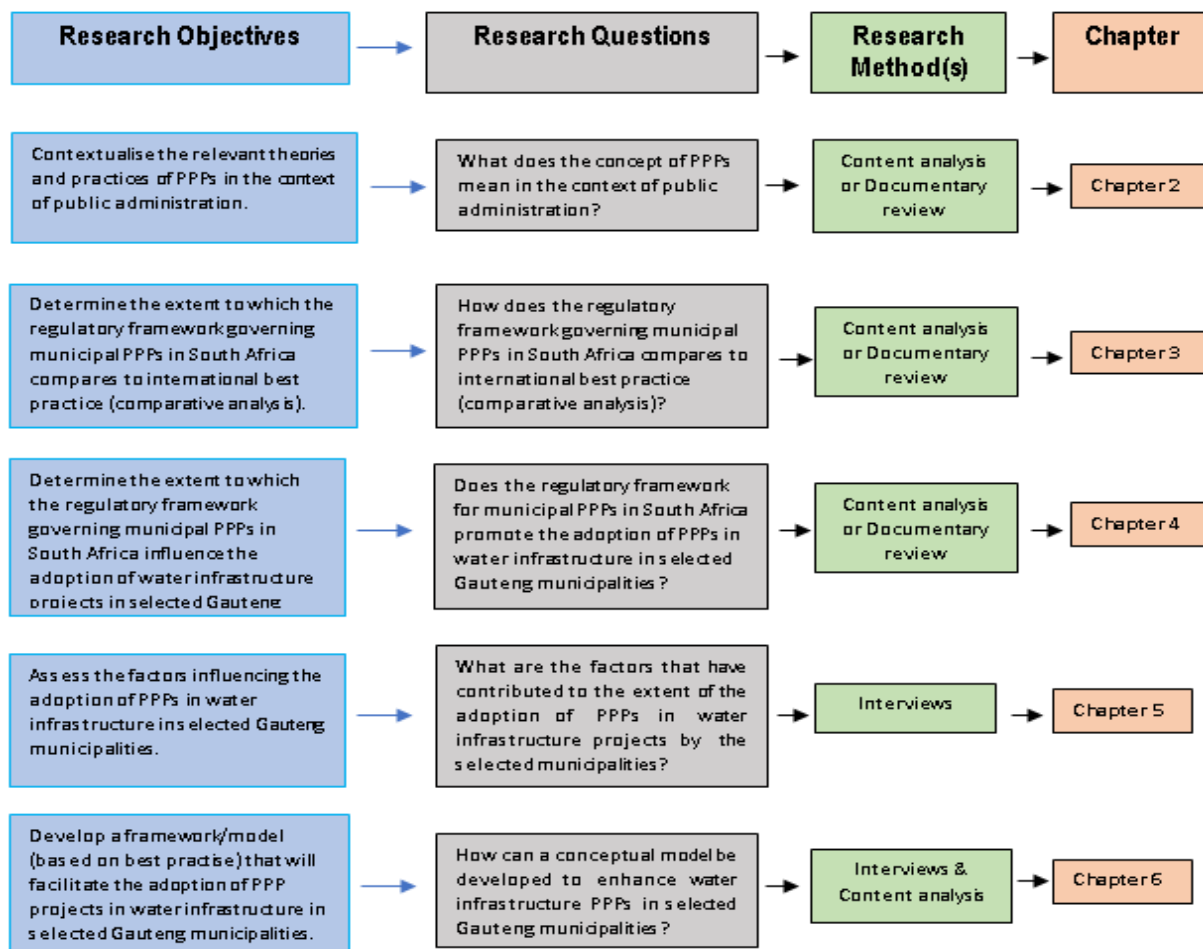
Participants from municipalities noted the contribution of the private sector in the delivery of water infrastructure projects. However, most participants identified the cumbersome regulatory environment and the time delays from National Treasury to issue views and recommendations as disincentivising PPP adoption. The regulatory regime had unintended consequences or was being used to propel the negative sentiments on PPPs and this has been used by politicians to discourage bureaucrats from pursuing infrastructure projects using private sector participation. Participants highlighted that politicians prefer projects that can be implemented during their five-year-term. Other factors cited by the participants include lack of skills by municipalities to plan long-term infrastructure projects, the water sector not being ideal for private sector participation due to its social objectives and the lack of independent water regulation, which disincentivises private sector participation, as no entity reigns in any political influence.

The next chapter summarises the findings of the study and makes recommendations on the regulatory framework.

## 6. CHAPTER SIX: FINDINGS, RECOMMENDATIONS AND CONCLUSION

### 6.1 Introduction

The preceding chapters provided a contextual overview of public-private partnerships (PPPs) within Public Administration (Chapter 2) and Chapter 3 outlined international experience of PPPs in water infrastructure with respect to China, Mexico, Brazil and the United Kingdom (England and Wales) in search of best practice. Chapter 4 explored the PPP framework in South Africa and benchmarked it to best practice from other countries. Chapter 5 explored the factors influencing the adoption of municipal public-private partnerships (PPPs) in the water sector in selected municipalities in Gauteng Province. **Figure 6.1** shows what was covered and how it links to the research objectives and research questions.



**Figure 6.1: Summary of the chapters**

Source: Researcher

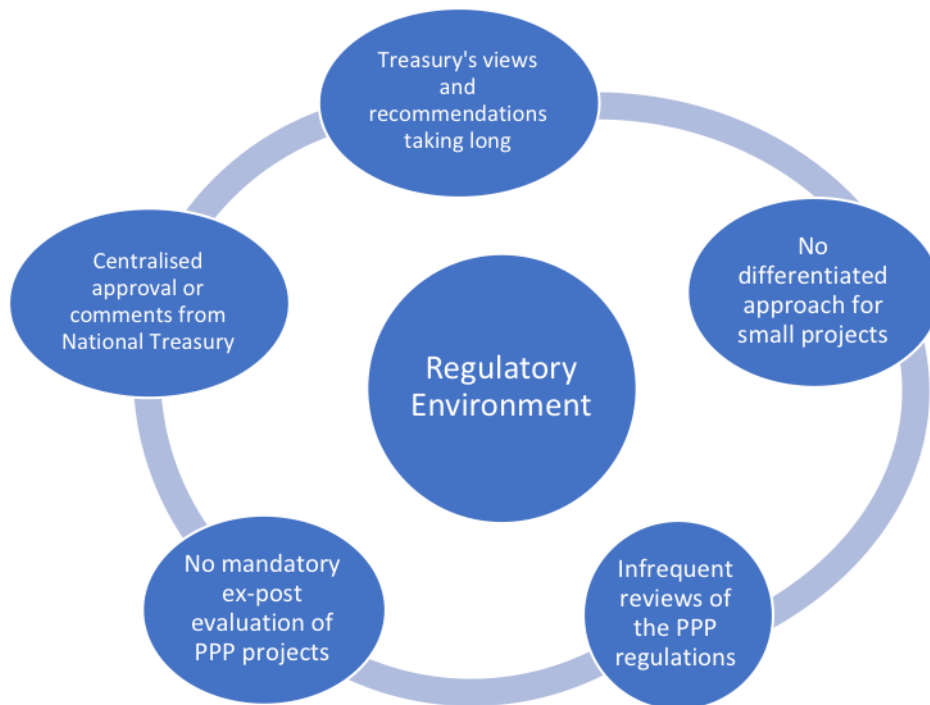
This chapter (Chapter 6) summarises the study, and highlights some of the major findings which are triangulated from literature review, documentary review and participant interviews. Recommendations on the proposed PPP regulatory framework are also discussed.

## 6.2 Findings on regulatory environment

**Chapter 3** explored international experience of PPPs by providing an in-depth analysis of China, Mexico, Brazil and the UK (England and Wales). The exposition of the international experiences uncovered best practice regulatory frameworks from countries that have implemented a significant number of water PPP projects. The objective was to compare South Africa's PPP framework against the collective experiences of the four countries. The insights into why the PPP frameworks in China, Mexico, Brazil and the UK (England and Wales) achieve more PPP projects that work, and how they work, have been outlined which informed the assessment of South Africa's framework and lessons therefrom.

Based on the assessment of the regulatory environment, South Africa's PPP framework is much aligned with international best practice in many ways. However, there are areas that need revision to improve the effectiveness of the regulatory framework. Participants and documentary evidence highlighted that the regulatory framework is burdensome and subject to four reviews by National Treasury which delays the process. South Africa had not reviewed its Municipal PPP Regulations since 2005 and therefore their effectiveness has not yet been determined. The 2019 Budget Review released by National Treasury alluded to the need to review the PPP framework to improve its effectiveness (National Treasury 2019a:156).

The Municipal PPP Regulations do not specifically cater for a framework to consider smaller PPP projects and utilise a one-size-fits-all approach. In addition, the centralised PPP Unit (only National Treasury) is not effective in providing both transaction advisory services and regulatory functions for PPPs. The centralised PPP Unit in South Africa does not have sufficient human resources to undertake research, policy-making, promote PPPs and simultaneously regulate PPPs. The main findings on the regulatory framework are summarised in **Figure 6.2**.



**Figure 6.2: Summary of the regulatory findings**

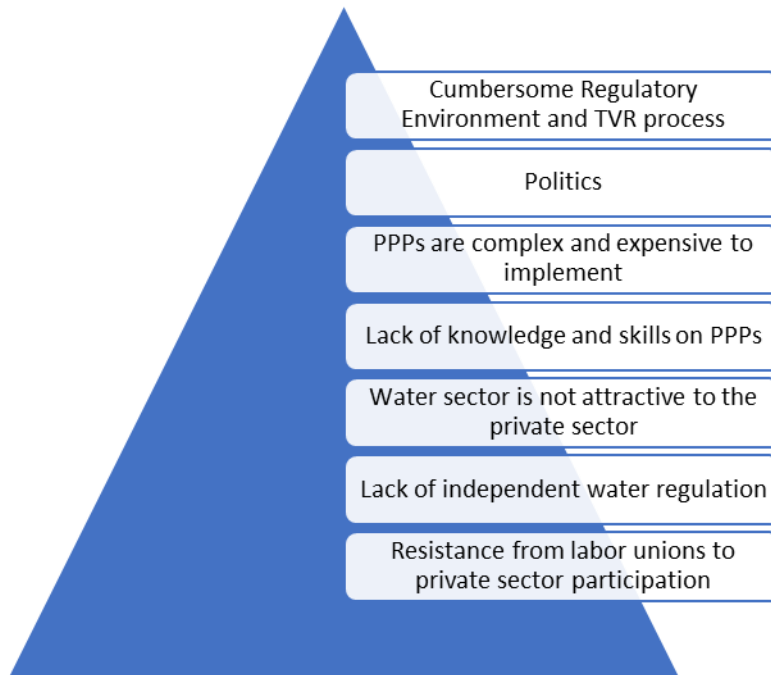
Source: Researcher.

### 6.3 Findings on factors influencing adoption of water PPP projects.

Chapter 5 explored the empirical findings of the study based on the views of the participants interviewed. It provided the empirical analysis and interpretation of the research findings based on the research questions. To recap, the study sought to assess the factors influencing the adoption of municipal public private partnerships (PPPs) in the water sector in selected municipalities in Gauteng Province.

Participants provided several factors in municipalities that impede water infrastructure PPP adoption. The factors identified by the participants are both internal to the municipalities and other external factors within the water sector. Most participants identified the cumbersome regulatory environment, delays from National Treasury to issue views and recommendations, preference by politicians for projects to be implemented within their term of office, lack of skills by municipalities to plan long term infrastructure projects and the lack of independent water regulation as deterrents to private sector participation. These factors are summarised in **Figure 6.3:**





**Figure 6.3: Summary of factors influencing water PPP adoption.**

Source: Researcher.

## 6.4 Recommendations

### 6.4.1 Review of the Treasury's views and recommendation (TVRs) process

As discussed in **Sections 4.6.2 and 6.2**, National Treasury is required to consider applications for municipal PPPs and provide four sets of comments and recommendations on a single application. Given the human capital constraints at National Treasury's Budget Office (unit that acts as the regulator), a review of the process is proposed to balance both financial exposure and efficient processing of the applications. The main issue identified in the municipal PPP regulatory process is the cumbersomeness and the lengthy time taken by National Treasury in issuing the four Treasury views and recommendations (TVRs). While there is recognition of the important role of National Treasury in the PPP process, the time delays in TVRs justifies the review of the Municipal PPP Framework. Treasury should be a gatekeeper of the most important stages of the process where their expert skills are required. Treasury's role is crucial at the inception phase and the development of the feasibility study. Once National Treasury has given its views and recommendations that a project is most appropriately financed through PPP, the municipalities should proceed with the procurement process without the National Treasury's views and

recommendations. Municipalities are familiar with the procurement process (TVR IIA, IIB) and may utilise experts to assist in the preparation of the procurement related documents.

With respect to the procurement process, two options are being proposed. Firstly, metropolitans and municipalities with sufficient capacity and experience with PPPs may proceed to procurement without the need for National Treasury's views and recommendations (TVR IIA, IIB). Secondly, municipalities with no experience of PPPs will have to approach the Provincial Treasury for TVRIIA and TVRIIB, as opposed to getting views from National Treasury. The provincial treasuries may interact with the National Treasury should the need arise. This approach will streamline the role of National Treasury in the process and at the same time focus National Treasury's input on critical aspects of the process.

The delegation of specific functions to the provincial treasuries is not new. Currently, National Treasury is responsible for monitoring of municipal budgets of the largest 17 municipalities in the country (metropolitan and secondary cities), while the nine provincial treasuries monitor the rest of the municipal budgets. Provincial treasuries already have some PPP experience and additional capacity might be required for them to effectively process PPP applications expeditiously.

To ensure that TVRs are responded to timeously, the PPP regulations have to prescribe timeframes for both National and provincial treasuries. A period of **three months** is proposed, given that the treasuries will require input from several units and other departments.

#### **6.4.2 Decentralised PPP units and creation of long-term infrastructure plans**

Mexico, China and Brazil's PPP frameworks allow for the establishment of PPP units at state and municipal level in order to support and develop PPPs in their respective jurisdictions. South Africa has a single PPP Unit housed in the GTAC which is centralised at national government sphere. The current staffing levels of South Africa's PPP Unit within the GTAC are not adequate to effectively promote, advise and participate in the development of policy interventions. While in theory provincial treasuries play a role, their role is limited, at best described as a tick box process to comply with the MFMA, which requires notification of the potential PPP to the respective provincial treasury. Some of the provincial treasuries do not have

dedicated PPP units but the Gauteng Provincial Treasury established the Gauteng Infrastructure Finance Agency (GIFA) to provide support to government entities (including municipalities) to fund infrastructure projects.

Based on international experience, large cities and metros in South Africa should have specialised PPP units to promote and create awareness of the potential use of PPPs. The eight metropolitan cities in South Africa account for a significant portion of the total capital budget for all municipalities and therefore have capacity to have dedicated PPP units. Specialised PPP units within large cities will assist in ensuring the development of internal skills, develop a sustained project pipeline and facilitate close interaction with National and provincial treasuries. Based on the interviews, participants indicated that the City of Johannesburg and the City of Tshwane are considering establishing PPP units or specialised finance units to proactively develop a sustained project pipeline that could be potentially financed through PPPs, if the feasibility study supports such a funding mechanism. The development of a long-term project pipeline might address the perception that PPPs take a long time, as the project planning is done well in advance and politicians might still be able to have some projects undertaken within their political term.

#### **6.4.3 Frequent monitoring and reviews of PPP framework**

Since the promulgation of the PPP regulations in 2005, there has not been any substantive review undertaken to enhance the PPP framework and improve outcomes. Municipal PPP Regulations were issued in 2005 and no review has been undertaken in the past decade. This is contrary to the experiences of countries such as China and the UK that periodically issue directives to address emerging issues that require quick resolution. In contrast, many reviews were done in the UK and China to allow for PPPs to be adaptable to changing market conditions and developments. National Treasury has since identified the need to review the PPP regulations given some impediments to the implementation of PPPs. National Treasury's review is currently underway to identify and address challenges impacting PPP project readiness and private sector participation (National Treasury 2020a:149). Despite this move by National Treasury, waiting for one big review every 15 years or so is too long.

Given the lack of independent ex post evaluation of PPPs, an assessment of the value for money is required on a continuous basis. The Auditor General of South Africa (AGSA) currently audits the procurement process only and not an evaluation of value for money, as is the case in the UK where the National Audit Office (NAO) presents a report in Parliament on all matters related to PPPs. Independent evaluation serves two purposes, firstly, to elevate the role of the PPPs as an infrastructure option and secondly, to timeously identify challenges with the regulatory framework and propose corrective actions. South Africa has not done ex-post evaluation of PPPs and this may be the reason for the limited changes to the PPP regulatory framework. Ex post evaluation may be useful to National Treasury to propose reforms based on the findings of the review.

Once a PPP project is implemented, Section 6 of the Municipal PPP Regulations places the responsibility of managing the PPP agreement on the accounting officer who is the signatory of the PPP agreement. The municipal council must be informed on the progress of the PPP implementation including any significant deviations, while the PPP regulations prescribe the contract management and monitoring through submission of reports to Council on the implementation of the PPPs.

The limitation in South Africa's framework is that there is no independent evaluation of the progress of PPPs under implementation, except the reports submitted to Council. This precludes the robust independent evaluation of PPPs under implementation, to identify what is working, what requires changes and whether there is value for money being derived from the PPP projects. In the UK, the National Audit Office (NAO) which is independent of government, as part of its audit process evaluates value for money for PPP projects. The NAO is equivalent to the Office of the Auditor General (OAG) in South Africa and reports directly to Parliament.

The Office of the Auditor General and the National Treasury do not undertake value for money for PPPs during and post implementation of a PPP project, depriving the government of an early warning mechanism. For instance, the NAO undertakes regular ex post reviews and submits them to the Select Committee on Public Accounts of the House of Commons. This mechanism of accountability ensures transparency in PPP deals (NAO 2018:40; Rachwalski & Ross 2010:279) and assists in raising awareness of PPPs and how they can be improved in the future.

Awareness of PPPs may take various forms such as training and capacity building, which South Africa through the PPP Unit in the GTAC has been doing for a number of years. Public accountability with regard to PPPs in Parliament or municipal council by an independent entity raises the awareness to politicians about PPPs. As discussed in this chapter, the adoption of PPPs as an infrastructure financing option is largely driven by political leadership with the assistance of the municipal officials.

#### **6.4.4 Overarching PPP law administered centrally**

South Africa's local government is subject to various Acts of Parliament with a number of sector departments (National Treasury, Cooperative Governance and Water and Sanitation) being the accountable authorities. Given this scenario, misalignment in the Acts or regulations is likely to occur, for instance, one of the conflict areas is the requirement in both the MFMA and the MSA that feasibility studies be conducted for any PPP project. The contents of the feasibility study appear similar but clearly are not identical. This misalignment may increase costs for a municipality by using external experts to compile the feasibility study. Extreme care is required for a municipality to comply with both the MFMA and the MSA. To address this problem, an overarching PPP law may be necessary encompassing all the elements currently provided in the MFMA and the MSA.

#### **6.4.5 Creation of an independent economic regulator for the water sector**

The regulatory certainty created by an independent water sector regulator is instrumental in attracting private capital. Experience from other countries indicates that independent water regulation is likely to achieve tariffs that are cost reflective which assures private capital investment. As highlighted before, the Department of Water and Sanitation is both involved in the value chain as policy maker and regulator. The dual role of the department creates perverse incentives and conflict of interest and is prone to political interference since both functions are subject to the same Minister. This scenario disincentivises private investment given the perceptions of heightened political interference.

In the UK (Wales and England), an autonomous regulatory agency, OFWAT, was established as an independent authority. As described earlier, OFWAT issues licenses to water utilities, regulates their activities, resolves disputes regarding contracts entered into by the utilities with third parties and conducts price reviews.

Decisions of regulators may be challenged in court or follow an appeal mechanism. A similar approach is followed in countries with an established PPP market such as the USA and Australia. The Chinese in the early reforms adjusted tariffs as a way of reassuring investors and showing that the water sector can be a profitable investment for private players.

The Department of Water and Sanitation for the past 10 years considered the creation of an independent water regulator, but nothing has materialised and deadlines are continuously moved further. The current timeframe being proposed is that the independent regulator will be in place in 2023 (National Treasury 2020b:723). The policy inertia by the DWS fuels regulatory uncertainty and disincentivises private sector investment.

#### ***6.4.6 Fast-track process for low value projects – thresholds to be put in place per sector***

South Africa has uniform guidelines for all municipal PPP projects with no distinction made between small or large projects. In other words, South Africa's PPP approval process is the same for all projects irrespective of project value. The guidance provided in the Municipal PPP Regulations has not reduced the complexities associated with the approval process, as small projects have to comply fully with the regulations. This is contrary to experiences in other countries. For example, in India the approval process is structured to consider the following: the project sponsor - whether it is a national or subnational entity, project size, or whether it is a special project under separate guidelines. In Indonesia, for projects to qualify for viability assessment the project value should exceed \$100 million and anything below that will not have such an assessment to minimise transaction costs for such a project. Despite the threshold limitation, the approval process for all PPP projects is uniform irrespective of the sector, similar to South Africa (World Bank Group 2014b:11). In the UK, HM Treasury does not provide firm thresholds, but suggests that much attention be given to projects of £20 million or less when undertaking value for money assessment. The UK commissioned a study to evaluate whether small projects (valued at £20 million or less) deliver value for money and concluded that 90 per cent of the projects met client's expectations, however, the procurement times ranged from 14 months to five years which was the same for other high value projects (World Bank Group 2014b:11; HM Treasury 2003:53).

Based on the experiences of other countries, South Africa may benefit from setting thresholds for PPP projects that would not be subjected to a normal PPP approval process. A framework for setting thresholds is required, for instance projects below a certain amount may be considered and approved by the provincial treasuries. Provincial treasuries may then request input or concurrence from National Treasury if a need arises. This would undoubtedly require capacitation of the provincial treasuries for them to be fully effective in undertaking the additional responsibilities.

The approval process for South Africa's PPPs are standardised with no distinction between large and small projects. However, in India, the approval process for projects at national, state and local level are distinct. Provision is made for national projects with "small values" to have a fast track process. Smaller projects are considered and approved by the Standing Finance Committee (SFC), the Expenditure Finance Committee (EFC) or an inter-ministerial committee (World Bank Group 2014b:12). Small projects at municipal level should not be submitted to the national Public Private Partnerships Appraisal Committee (PPPAC), but considered in each state. Similar to Brazil and Mexico, each state in India has its own institutional framework for PPPs and approvals within a specified project value are approved at state level.

#### **6.4.7 Review of the grant system to improve water PPP attractiveness**

The role of politics in the water sector value chain is entrenched and levying full cost recovery tariffs might be problematic. Private sector participation given this reality is likely to be muted, unless the grant framework is reformed to allow the pledging of conditional grants to finance upfront water infrastructure projects. To mitigate significant financial exposure of the fiscus, at most 50 per cent of a specific grant can be pledged or ring-fenced by national government as commitment to fund specific infrastructure. To mitigate potential misuse of the grant, National Treasury creates a mechanism where the funding is directed to the private operator rather than the municipality. The private partner will be guaranteed of a revenue source while delivering a service to residents. Given the amount of service backlogs and expansion of municipalities, conditional grant funding is envisaged to be a permanent feature of South Africa's fiscal framework.



#### **6.4.8 Improve capacity and skills in the public sector**

The complexity of PPPs was one of the reasons cited for its low uptake. Some municipalities had to rely on external skills to undertake feasibility studies and draft procurement documents. While there was training provided by a number of entities, the training was considered basic and not very adequate to deal with the complex nature of PPPs. In this regard, municipalities should develop in-house skills and one such mechanism is having dedicated PPP units where skills could be housed. In addition, increased resources are required at National Treasury's unit regulating PPPs, as there are only four officials dealing with all PPPs in South Africa.

#### **6.5 Proposed Regulatory Framework**

Based on the findings and recommendations discussed above, this section proposes a PPP framework to enhance the effectiveness of the regulatory environment. The main issues identified in the municipal PPP regulatory framework are the cumbersome process and the lengthy time taken by National Treasury in issuing the four Treasury views and recommendations (TVRs). TVRs are recommended to be reduced from four to two reviews. TVR IIA and TVR IIB will either be conducted at the municipal level (for municipalities with PPP experience) or at provincial treasury level (for municipalities that have not done PPP projects before). The provincial treasuries would require capacity and National Treasury would be available to assist when required.

In addition, lack of ex post evaluation does not create any impetus for regulatory reforms and consequently the proposed framework mandates the Auditor General in conjunction with National Treasury to evaluate the progress in PPP implementation.

To further promote PPPs, the proposed framework advocates for the separation of the role of the Government Technical Advisory Centre (GTAC) on PPPs. The GTAC is proposed to specifically focus on advisory services for PPPs and not to promote the use of PPPs. The reason is that there is perceived lack of separation of the roles of National Treasury as a promoter, advisor and regulator of PPPs. It is for this reason that PPP promotion should be the role of the private sector, and government at large should be given the limited fiscal space in South Africa. The GTAC/PPP Unit at National Treasury is demand driven and does not pro-actively promote the use of PPPs, given its mandate and limited personnel (Ngamlana 2009:42). In this regard, it

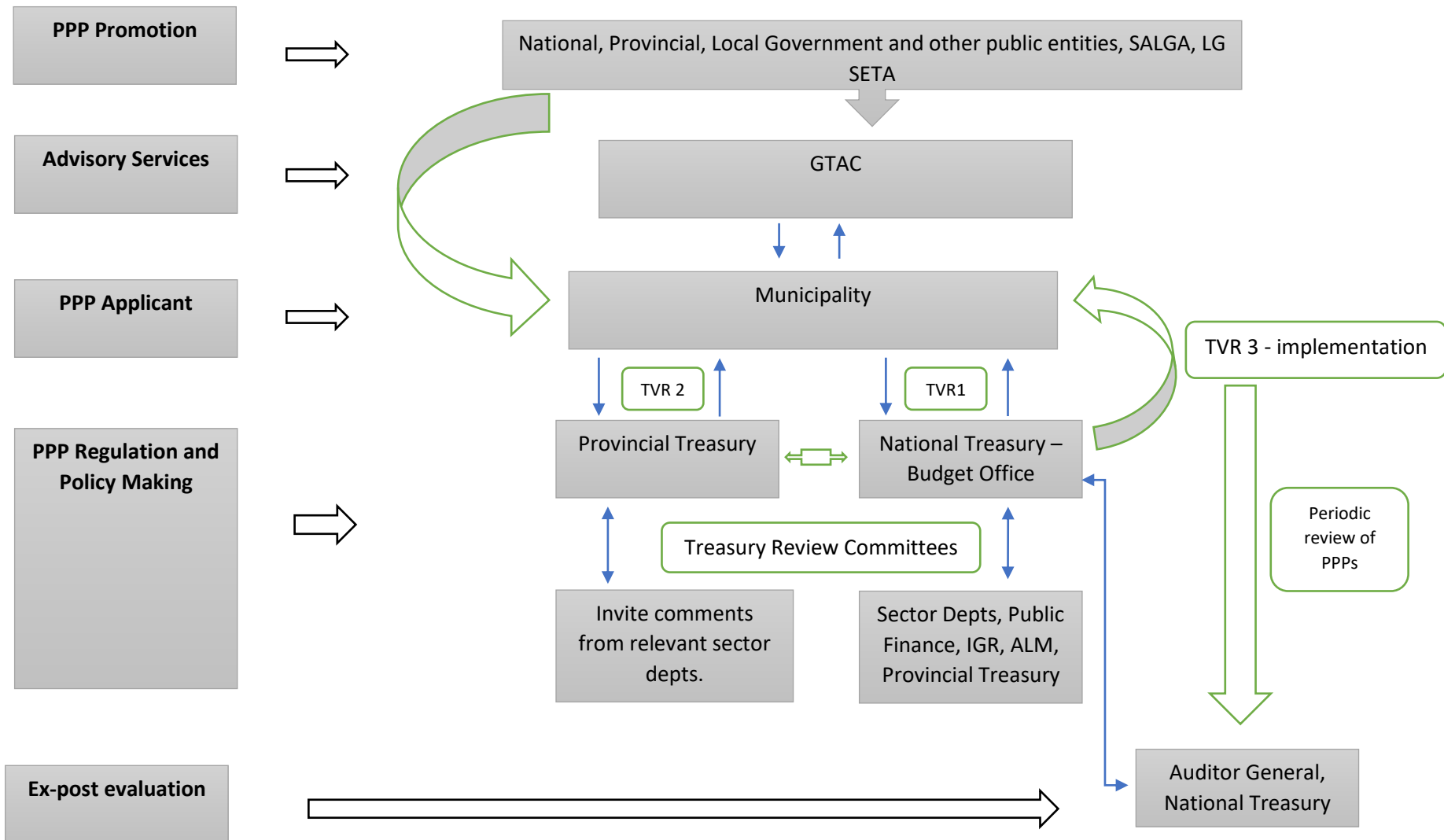
is proposed that the GTAC advises municipalities on PPPs and assists them to follow the laid out process. The promotion of PPPs is proposed to be driven by all government entities (national and provincial departments, municipalities and organised local government) and private sector players.

Promotion of PPPs at local government can also be done through developing academic programmes or accredited courses on municipal PPPs. In South Africa, there are various institutions that can offer specialised and accredited programmes on municipal PPPs. Entities such as the Local Government Sector Education and Training Authority (LGSETA) and the National School of Government (NSG) can provide accredited courses to promote PPPs. The LGSETA is mandated to “promote skills development for the local government sector” (LGSETA 2019:11). Similarly, the NSG “has a constitutional and legislative mandate to provide education, training and development in the three spheres of government, state-owned entities (SOEs) and organs of state” (NSG 2020:5).

In Canada and Australia, PPPs are largely driven from the provincial/state level as opposed to federal government level (Palcic *et al.* 2019:5; Raisbeck, Duffield & Xu 2010:346). PPP processes and evaluation criteria are different across states in Australia, as they consider peculiar circumstances in their states. In addition, these varying conditions may induce some level of competition between states to attract private sector investment (Raisbeck *et al.* 2010:346). The policy framework guiding the evaluation criteria and process to be followed also varies among the Australian states. In Canada, the provincial governments of Ontario, British Columbia, Alberta and Quebec are largely responsible for the bulk of PPP projects and are assisted by specialist PPP agencies or government departments in these provinces (Palcic *et al.* 2019:5).

As discussed previously, Mexico, China and Brazil’s PPP frameworks allow for the establishment of PPP units at state and municipal level in order to support and develop PPPs in their respective jurisdictions. This is one feature that is lacking in the South African PPP framework where the PPP Unit/GTAC has multiple tasks which they cannot execute due to human capacity constraints. The size of the South African PPP market may not justify several PPP units, but the promotion of PPPs

should be the responsibility of the entire government and not only the PPP Unit within GTAC. The proposed framework is summarised in **Figure 6.4**.



**Figure 6.4: Proposed municipal PPP framework.**

Source: Researcher's compilation.

The recommendations cited above are consistent with some of the proposed changes envisaged by National Treasury based on its review of the PPP regulatory environment (the review is for national, provincial and municipal government). National Treasury and the World Bank are currently undertaking a review of the PPP framework and some of the interim recommendations being proposed subject to workshop validation with various stakeholders include the following (National Treasury 2021b:168):

- increasing capacity and PPP skills in the public sector;
- creating a new framework for small projects;
- review downwards of the number of public consultation requirements for municipal projects;
- involve stakeholders such as the Municipal Infrastructure Support Agency (MISA) to play a role in municipal PPP projects; and
- making it easier for municipalities to deal with unsolicited bids.

## **6.6 Recommendations for further research**

The study used views of senior municipal officials, government departments and the private sector to understand the impediments to PPP adoption in the water sector. The study was anchored in the New Public Management (NPM) paradigm and public choice theory (PCT). NPM is founded in neo-classical and new institutional economics with specific focus on public choice, transactions cost and principal agent theories. These theories advocate for the separation of policy making and implementation in a decentralised administrative system (Hyndman & Lapsley 2016:388). Policy making is the domain of the municipal council, while the bureaucrats implement the policies or strategies. To this end, further empirical studies may be necessary to exclusively focus on the role of the politicians on PPPs rather than relying on the views of the bureaucrats. The permission letters granted to the researcher were from the municipal administration (bureaucrats) and could not be used to interview councillors. To interview councillors a separate process would have been followed with the Speaker of Council.

Another area for future research is to compare the constraining factors for PPPs at municipal versus national or provincial government spheres. The context at

national/provincial government might be very different to that in the municipal environment.

## **6.7 Conclusion**

This chapter provided a summary of the findings, recommendations and proposed regulatory framework for municipal PPPs. The objective of the study was to explore the factors influencing the adoption of municipal water PPPs. The inspiration of the study was to find ways of improving the PPP regulatory framework to ensure that citizens get decent access to water. In this regard, proposing a PPP regulatory framework was important to remove impediments, as well as adding to the literature on municipal PPPs. The study also expanded on the existing knowledge of self-interest objectives as postulated by the public choice theory.

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## LIST OF ANNEXURES

### Annexure 1: Proof of Title Registration



Faculty of Economic and Management Sciences

**POSTGRADUATE COMMITTEE**

11 May 2020

Prof DJ Fourie  
School of Public Management and Administration

Dear Professor Fourie

#### TITLE REGISTRATION

This serves to advise that the title submitted for the research of the candidate indicated below was approved by the Postgraduate Committee:

<b>Student:</b>	<b>T Mandiriza</b>
<b>Student number:</b>	18102299
<b>Degree:</b>	PhD (Public Administration and Management)
<b>Supervisor/Promoter:</b>	Prof DJ Fourie
<b>Co-supervisor/Co-promoter:</b>	Dr OS Madumo
<b>Approved title:</b>	Assessment of factors influencing the adoption of public private partnerships in water infrastructure projects in selected municipalities
<b>Date approved:</b>	8 May 2020

#### **IMPORTANT:**

Please note that the next step in the research process is to obtain ethics clearance. In terms of the UP Guidelines for Ethical Research (S4083/00), ethics clearance is required before any research may be undertaken.

Sincerely



pp PROF K BARAC  
CHAIR: POSTGRADUATE COMMITTEE

cc: Dr OS Madumo  
Prof MR Chitiga-Mabugu  
Student Administration

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Fakulteit Ekonomiese en Bestuurswetenskappe  
Lefapha la Disaense tša Ekonomi le Taolo

## Annexure 2: Research Ethics Committee Approval



Faculty of Economic and Management Sciences

### RESEARCH ETHICS COMMITTEE

#### Approval Certificate

20 November 2020

Mr T Mandiriza  
Department: School of Public Man + Admin

Dear Mr T Mandiriza

The application for ethical clearance for the research project described below served before this committee on:

<b>Protocol No:</b>	EMS187/20
<b>Principal researcher:</b>	Mr T Mandiriza
<b>Research title:</b>	Assessment of factors influencing the adoption of public private partnerships in water infrastructure projects in selected municipalities.
<b>Student/Staff No:</b>	18102299
<b>Degree:</b>	Doctoral
<b>Supervisor/Promoter:</b>	Prof DJ Fourie
<b>Department:</b>	School of Public Man + Admin

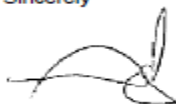
The decision by the committee is reflected below:

<b>Decision:</b>	Approved
<b>Conditions (if applicable):</b>	
<b>Period of approval:</b>	2020-11-24 - 2022-12-31

The approval is subject to the researcher abiding by the principles and parameters set out in the application and research proposal in the actual execution of the research. The approval does not imply that the researcher is relieved of any accountability in terms of the Codes of Research Ethics of the University of Pretoria if action is taken beyond the approved proposal. If during the course of the research it becomes apparent that the nature and/or extent of the research deviates significantly from the original proposal, a new application for ethics clearance must be submitted for review.

We wish you success with the project.

Sincerely



pp PROF JA NEL  
CHAIR: COMMITTEE FOR RESEARCH ETHICS

## Annexure 3: Permission letters for the case studies

### OFFICE OF THE CITY MANAGER

To: Mr Thulane Mandiriza



Cnr Cross and Roses Streets  
Germiston  
Private Bag X1069  
Germiston 1400  
South Africa  
Tel: (011) 999-0796  
Fax: (011) 999-1811  
city.managers@ekurhuleni.gov.za  
www.ekurhuleni.gov.za

Enq: Thabo Nzoyi  
[Thabo.nzoyi@ekurhuleni.gov.za](mailto:Thabo.nzoyi@ekurhuleni.gov.za)  
(011) 999 – 0796

#### APPROVAL FOR THE REQUEST TO CONDUCT RESEARCH ASSESSING FACTORS INFLUENCING PUBLIC PRIVATE PARTNERSHIPS IN THE WATER INFRASTRUCTURE PROJECTS. THE CASE STUDY FOR SELECTED GAUTENG MUNICIPALITIES.

The City of Ekurhuleni acknowledges receipt of your request to conduct research assessing factors influencing public private partnerships in water infrastructure projects. The case study for selected municipalities in Gauteng. The selected municipalities include all metros in Gauteng plus Mogale City and Midvaal.

Your request to conduct research within the City of Ekurhuleni's Water Management Department is granted. The Intergovernmental Relations Unit will in conjunction with the Strategy Department provide the necessary administrative and logistical support you may require.

Yours sincerely,

Mrs Perédi Marota  
AHOD: STRATEGIC SUPPORT

31/08/2020  
DATE

Dr Imogen Mashazi  
CITY MANAGER

DATE



#### City of Johannesburg Metropolitan Municipality Group Finance

Thuso House  
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Braamfontein

PO Box 5000  
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South Africa  
2000

Tel +27(0) 11 628 4812  
Fax +27(0) 11 403 4141  
[www.joburg.org.za](http://www.joburg.org.za)

To: **Mr. Thulani Mandiriza**  
From: **Manenzhe Manenzhe**  
Group Chief Financial Officer

Date: **03 September 2020**

Dear Mr. Thulani Mandiriza

#### RE: RESEARCH ON FACTORS AFFECTING ADOPTION OF PUBLIC PRIVATE PARTNERSHIPS FOR MUNICIPAL WATER INFRASTRUCTURE

Your letter requesting permission to conduct a study on public-private partnerships at local government level, has reference.

You are granted permission to conduct the study within our institution. You may approach officials who will exercise their discretion to participate in interviews.

Wishing you well in your studies.

Kind regards,

Manenzhe Manenzhe  
Group Chief Financial Officer



Tel: 016 360 7411 \* Fax: 086 502 2834 \* E-mail: [mm@midvaal.gov.za](mailto:mm@midvaal.gov.za)

**OFFICE OF THE MUNICIPAL MANAGER**

Ref: 17/2/R

23 July 2020

**TO WHOM IT MAY CONCERN**

E-mail: [u18102299@tuks.co.za](mailto:u18102299@tuks.co.za)  
[Mandiriza@gmail.com](mailto:Mandiriza@gmail.com)

Dear Sir/Madam

**SUBJECT: PERMISSION TO CONDUCT RESEARCH AT MIDVAAL LOCAL MUNICIPALITY**

Permission is hereby granted to the below mentioned student to conduct research at Midvaal Local Municipality.

**Student name:** Thulani Mandiriza

**Student Number:** u18102299

**Topic:** Assessment of factors influencing adoption of Public Private Partnerships in Municipal Water Infrastructure Projects

The municipality supports academic research and requests that the findings and recommendations of the research be shared with the municipality.

While permission is granted the municipality cannot be held accountable for delayed responses from the targeted respondents/ population. The municipality encourages the use of electronic methods of data collection in light of COVID19.

Trust that you will find the above in order.

Yours Faithfully

N.S. MHLANGA  
MUNICIPAL MANAGER



**City Strategy and Organizational  
Performance**

Room CSP22 | Ground Floor, West Wing, Block D | Tshwane House | 320 Madiba Street | Pretoria | 0002

**My ref:** Research Permission/Mandiriza  
**Contact person:** Pearl Maponya  
**Section/Unit:** Knowledge Management

**Tel:** 012 358 4559  
**Email:** [PearlMap3@tshwane.gov.za](mailto:PearlMap3@tshwane.gov.za)  
**Date:** 30 July 2020

**Mr Thulani Mandiriza**  
601 Breyten Street  
Faerie Glen Ext 18  
0081

Dear Mr Mandiriza

**RE: FACTORS INFLUENCING PUBLIC PRIVATE PARTNERSHIPS IN MUNICIPAL WATER  
INFRASTRUCTURE PROJECTS.**

Permission is hereby granted to Mr Thulani Mandiriza, Doctoral Candidate in Public Administration and Management at the University of Pretoria (UP), to conduct research in the City of Tshwane Metropolitan Municipality.

It is noted that one of your research objective is to understand the existing problems in the PPP framework and how it impedes the effective uptake of water infrastructure projects by local government. The City of Tshwane further notes that all ethical aspects of the research will be covered within the provisions of UP Research Ethics Policy. You will be required to sign a confidentiality agreement with the City of Tshwane prior to conducting research.

Relevant information required for the purpose of the research project will be made available as per applicable laws and regulations. The City of Tshwane is not liable to cover the costs of the research. Upon completion of the research study, it would be appreciated that the findings in the form of a report and or presentation be shared with the City of Tshwane.

Yours faithfully,

PEARL MAPONYA (Ms.)  
DIRECTOR: KNOWLEDGE MANAGEMENT



## Annexure 4: Sample of the interview instrument for municipalities



### A. Background

1. What is your title (current position) and explain your key work responsibilities?
2. For how long have you been in this position?
3. For how long have been with this organisation?
4. Which other position(s) have you held in the public sector or elsewhere? And the corresponding duration?

### B. Status Quo

5. Describe the overall performance of water services in the municipality?
6. Describe how the municipality is dealing with the following (please provide details):
  - a. Water infrastructure backlogs?
  - b. Maintenance of water infrastructure?
  - c. Investment in new water infrastructure?
7. What are the main sources of funding for water infrastructure projects and please rank them in order of contribution to overall water infrastructure funding?

### C. PPP Laws and Regulations

8. Have you received any training on regulations governing municipal PPPs? If yes, describe the nature of the training?
9. Have you ever worked in a municipality which undertook any PPP? If yes, briefly describe the project (e.g. electricity, roads etc)?
10. How effective are Municipal PPPs Regulations and MFMA in supporting and promoting PPPs in water infrastructure investment? Please explain your response.
11. Has your municipality considered PPP projects for the water sector? If so, what was the outcome? Explain your response.
12. Is there general support of PPPs in your municipality? Provide some examples to support your view?

13. Describe the measures that the municipality has put in place to support the adoption of PPPs in general and specifically water infrastructure PPPs. Please provide details.
14. To what extent do you believe PPPs can enhance the effectiveness of water infrastructure investment and improve water delivery? Explain your answer.
15. List and explain at least 7 factors that have influenced the adoption or non-adoption of water infrastructure PPPs in your municipality?
16. Of the factors listed above, which factor ones do you rank as the top 4 factors and explain why?
17. Describe any measures the municipality considered or put in place to address the factors listed above (15).
18. Explain any measures the municipality should put in place to promote PPPs in water infrastructure?
19. Provide your views on the regulatory framework for Municipal PPPs.

#### **D. Skills required for PPPs**

20. To what extent would the municipality rely on the following skills (internal skills, consultants, other government agencies, international development agencies, other) if it decides to implement PPP projects in the water sector? Rank the options in order of importance.
21. Describe the measures or policies in the municipality that may be used to appoint external consultants or outside technical advisors to support PPPs in water infrastructure?

#### **E. Private sector involvement**

22. Describe the role the private sector (including financiers) play in financing PPPs in water infrastructure?
23. Do you believe PPPs in the water sector can be profitable for the private sector? Explain your response.
24. Describe any factors in the municipality that may influence (positively or negatively) private sector participation in water infrastructure PPPs.

## Annexure 5: Participant Consent Form



Dear Participant

Welcome to the survey linked to the study entitled: Assessment of factors influencing the adoption of public private partnerships in water infrastructure projects in selected municipalities.

Please take note of the following:

1. This is an anonymous survey as your name will not appear on the questionnaire.
2. The answers you give will be treated as strictly confidential as you cannot be identified in person based on the answers you give.
3. Your participation in this study is very important to us and will provide valuable information to the success of the study. You may, however, choose not to participate and you may also stop participating at any time without any negative consequences. In addition, should if you wish not to answer any particular question or questions, you are free to do so.
4. You will have the opportunity to ask questions about the proposed study before signing consent.
5. The results of the study will be used for academic purposes and may be published in academic journals. We will provide you with a summary of our findings on request.
6. Please answer the short survey as completely and honestly as possible.

Please contact my study leader Professor David Fourie [email: [prof.djfourie@up.ac.za](mailto:prof.djfourie@up.ac.za) Telephone 012 420 3472] if you have any questions or comments regarding the study.

Please sign the form to indicate that:

- (i) You have read and understand the information provided above, and
- (ii) You give your consent to participate in the study on a voluntary basis.

---

**Name of Participant**

---

**Date**

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**Signature**

