

**EXPLORING PRIVATE SECTOR CHALLENGES IN FINANCING
PPPs IN BOTSWANA**

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PLAGIARISM DECLARATION

Declaration

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ABSTRACT

The need to invest in infrastructure globally is well documented, and its role in economic growth is hotly debated. The current state of Africa's infrastructure is such that it needs huge capital investments, and Botswana is no exception. Botswana faces challenges in financing and delivering infrastructure assets, maintenance and upgrades, and meeting operational obligations for existing infrastructure. Historically, the government has funded infrastructure projects as part of its expenditure budget, supported by relatively high levels of government revenue. This situation is changing quickly, given the tight fiscal conditions driven by reduced revenue from the mining sector and the shocks brought about by the coronavirus pandemic – among other things. The current situation has forced the government to consider alternative ways of financing infrastructure, which include public-private partnerships (PPPs). The idea of PPPs was first mentioned in the 2002/2003 budget speech, and the PPP framework was approved in 2009 – however, only two projects (the SADC head office and Ombudsman office) have been delivered to date, which is disappointing and warrants investigation. Against this background, the study had two objectives: first, to assess whether the Public Investment Program (PIP) for projects is suitable for PPPs, and second, to identify factors, if any, that affect private sector participation in financing PPP projects. The study employed the thematic analysis technique to analyse semi-structured interviews conducted with 13 participants.

The finding of the study indicates that the current PIP is not suitable for PPP projects, as there is little private sector involvement, and the information submitted for PPPs cannot be the same as for other projects which will be government funded. The study also revealed five challenges to the private sector: capacity issues and a lack of technical expertise, unclear legal/regulatory frameworks, unclear mandates and responsibilities for statutory bodies and ministries, unreasonable execution duration, and inadequate stakeholder engagements.

Based on the findings, it is recommended that the government needs to build technical expertise and capacity at both the government and private sector levels. The government should also appoint a PPP advisory board to conduct a holistic review of laws, procurement policies and mandates for statutory bodies to ensure that they are fully supportive of PPPs. Finally, the current PPP frameworks should not only be reviewed but should also be expanded upon to include issues such as stakeholder engagements.

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God before everything, for “I can do all things through Christ who strengthens me” (Philippians 4:13)

This one is for you Mum and Dad, I love you both, and thank you so much for your unconditional love and support. Mum, you have always said you are looking forward to seeing me graduate and attain my master's – I also know that you want me to get my Ph.D. and become Dr. Masuga. Cheers to the first step and to the next milestone. This time around, we are taking Dad to my graduation.

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Ke le rolela hutshe, Ke bo ke leboga go menagane a Modimo a lesogofatshe

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GLOSSARY OF TERMS

AFDB	African Development Bank
BOT	Build, Operate and Transfer
BOO	Build, Operate and Own
DFI	Development Finance Institution
DFBOF	Design, Finance, Build, Operate, Transfer
EPC	Engineering, Procurement, and construction
GoB	Government of Botswana
GDP	Gross Domestic Product
ICA	Infrastructure Consortium for Africa Secretariat
IPP	Independent Power Producers
JV	Joint Venture
MFED	Ministry of Finance and Economic Development
MLA	Mandate Lead Arranger
NDP	National Development Plan
OECD	Organisation for Economic Co-operation and Development
O&M	Operations and Maintenance
PIP	Public Investment Program
PPAD	Public Procurement and Asset Disposal
PPP	Private Public Partnerships
SACU	Southern African Customs Union
SADC	Southern African Development Corporation
SDG	Sustainable Development Goals
SPV	Special Purpose Vehicle

CHAPTER 1

INTRODUCTION

1.1 Background of the study

The need to invest in infrastructure is well documented, and its role in economic development is hotly debated. According to McKinsey & Company (2016), the current annual infrastructure gap that is needed to meet the growth forecast for 2030 is 3.3 trillion USD. The bulk of this is in emerging and developing countries that are currently underinvesting in infrastructure. According to the World Bank (2019, p.4), “Developing countries around the world continue to face challenges in financing sufficient infrastructure – estimated at 4.5% of GDP for lower and middle-income countries”. It is estimated that in 2018, 100 billion USD was received in commitments for financing infrastructure projects in Africa (ICA, 2018). This is lower than the 130-170 billion USD estimated (AfDB, 2018), meaning that the financing gap in Africa is between 30 and 70 billion USD. The amount spent going forward is likely to decrease, given the impact of the COVID-19 pandemic, with many African countries in survival mode.

The Government of Botswana (GoB) launched Vision 2036, suggesting a trajectory to achieve high-income status by the year 2036. On the back of this, the GoB identified six broad-based national priorities. One of the key national priorities is the provision of appropriate infrastructure,(MFED, 2020) (MFED, 2022) which includes (i) improving electricity generation and distribution, (ii) upgrading cross-border transport infrastructures like rail and air cargo connectivity, (iii) improving health and education facilities, (iv) keeping up with 4IR technological developments, and (v) maintaining existing infrastructure.

Botswana is facing challenges in the financing and delivery of infrastructure assets as well as maintenance and upgrades and meeting operational obligations of the existing infrastructure. As such, "the quality of some infrastructure at present is lagging behind many of its peers" (AfDB, 2014, p.12), while some of the infrastructure assets are operating below the intended capacity. This is partly due to a lack of funds required to meet these obligations (Kelesego, 2020).

Infrastructure in Botswana is funded out of the national budget, as they are considered a public good. Historically, it was funded primarily by government revenue, with more than half of the country's revenue generated by mineral income (mostly diamonds) as well as the Southern

African Customs Union (SACU) revenue-sharing agreement. Outside of SACU and mineral revenue, tourism is a growing contributor to the government's purse. To supplement infrastructure funding, the country maintained a conservative reliance on debt. As part of its prudent debt management, the government adopted a fiscal rule that set the ceiling of total debt to GDP at 40%, split equally between domestic and foreign debt (Kelesego, 2020). The government internationally kept debt levels very low, currently at 23.43% of GDP: domestic debt at 12.82% and external debt at 10.61% (MFED, 2021).

The Government of Botswana is experiencing budgetary constraints: firstly on the back of relatively lower mineral revenue, given the diamond sector's plateauing output and rising costs of production (MFED, 2022b), and secondly through the shocks brought about by the COVID-19 pandemic (i.e. low diamond revenue on the back of low demand, which disrupted the supply chain – reduced SACU revenues all still felt in the system). According to Moody's (2021), which downgraded the country's rating from A3 to A2, Botswana's fiscal strength has deteriorated, and fiscal reserves are almost depleted. As such, there is a reduced capacity to absorb further shocks in the economy. COVID-19 had a huge fiscal impact resulting in a large fiscal deficit of 16.41 billion BWP (1.1 billion USD) or 9.4% of GDP in 2020/2021. For 2022/2023, the fiscal deficit is projected to be 6.98 billion BWP (500 million USD) or 3.2% of GDP (MFED, 2022a) and will be funded by a combination of government bonds and external borrowing.

The question, then, is how Botswana will continue to invest in infrastructure, given its fiscal position and the need to keep debt very low. There is a need to create opportunities for the private sector to play a more meaningful role in the provision of infrastructure, to accelerate the pace of infrastructure development.

1.2 Research Problem

Historically, the government has funded infrastructure projects as part of its expenditure budget, supported by relatively high government revenues. This situation is changing quickly, given the tight fiscal conditions driven by reduced revenue from the mining sector (MFED, 2022) which according to Bank of Botswana Statistics used to constitute c41% of government revenue in 2011 and now constitutes just above 20%. The mining sector is now mature, with plateauing output and rising production costs (MFED, 2022b) which has resulted in budget deficits over the years becoming more frequent. This situation does not bode well for the ever-growing

demands for infrastructure projects and the need to balance it with other government priorities. The government has indicated since 2002/2003 that PPPs will be used extensively to finance infrastructure; however, only two projects have been delivered by PPPs to date (MFED, 2022b), which is disappointing and warrants an investigation. Beyond this, various PPPS projects have been proposed: the most recent is a request for proposal for Independent Power Producers (“IPPs”) – however, implementation has been slow (MFED, 2022b). The problem areas that this study seeks to address are summarised as follows:

- The slow implementation of PPPs in Botswana, given the long-standing pipeline.
- The lack of appetite from the private sector to fund infrastructure projects.

Though PPP as a topic is well researched and a wealth of information is available to the public globally, PPP is a relatively new concept in Botswana and there is a dearth of literature on PPPs in Botswana. A few of the available studies include Botlhale (2016), which focused on the importance of PPP in closing the infrastructure gap in Botswana, and Molokwane & Tshombe (2017), who focused on how PPP can improve service delivery. These studies, however, do not seek to understand the challenges in financing PPPs in Botswana (Kelesego, 2020). This study will add to the limited available literature on PPPs in Botswana.

1.3 Research questions

This study aims to answer the following research questions:

- Is the current process of delivering infrastructure in Botswana appropriate for PPP projects?
- What are some of the challenges in getting the private sector to finance infrastructure in Botswana?

1.4 Research objectives

The research objectives are as follows:

- To explore the suitability of a Public Investment Program for financing PPPs.
- To identify factors that affect private sector participation in the delivery of infrastructure in Botswana.

1.5 Scope and Justification of the study

The current state of Africa's infrastructure, and certainly that of Botswana, needs huge capital investments for development (McKinsey, 2020). Botswana's vision is to achieve high-income status by the year 2036, and part of that vision involves having the required infrastructure to support this vision (Government of Botswana, 2016). On the back of this, Botswana has spent and continues to spend on infrastructure, and some of the key sectors include power, water and sanitation, and information and technology. Despite the huge public bill for infrastructure, the country's infrastructure leaves much to be desired. Due to COVID-19, the country is currently running a budgetary deficit, making infrastructure provision more difficult than before.

PPPs are one of the most globally adopted models that can be implemented to encourage private participation in infrastructure funding (Colverson & Perera, 2011). However, they appear to be barely covered academically, specifically in Botswana (Botlhale, 2016). Botswana is currently reviewing its private sector participation in infrastructure funding, and findings from this study can go a long way in advising the government and policymakers as they craft the strategy.

1.6 Organisation of the study

This paper is organised as follows: Chapter 1 is the introduction and will cover the background of PPPs, and provides an overview of Botswana's infrastructure status, challenges, and what this study seeks to explore. Chapter 2 is the literature review and explores existing literature on PPPs and covers not only key concepts but types of infrastructure funding, different models of PPPs, and infrastructure funding in Botswana. Chapter 3 explains and justifies the research methodologies used in the study to answer the research question and describes how the sample was selected and how data was collected and analyzed. Chapter 4 presents and discusses the findings of the study, while Chapter 5 comprises the conclusion and recommendations to the Government of Botswana.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

According to Linnenluecke et al. (2020), a review of existing literature and debates is important as it aids the researcher in gathering existing knowledge, to examine the information as it currently stands. Section 2.2 to section 2.7 covers the definition of terms and concepts commonly used when discussing PPPs, types of infrastructure funding, different types of PPP models, the structure of PPPs, and how they are typically financed. The final section of the literature review present an overview of infrastructure funding in Botswana, the evolution of PPPs in Botswana, projects delivered by PPPs, as well as a highlight of the pipeline of projects that the Government of Botswana has earmarked for PPPs.

2.2 Definition of terms and concepts

2.2.1 Public Private Partnerships

Several definitions of PPPs exist. Generally, it includes the spectrum of all possible relationships between the public and the private sector to provide goods or services (Li et al., 2000). The World Bank (2017, p.1) defines PPPs as “A long-term contract between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance.” In South Africa, PPPs are “defined as a contract between a public sector institution and a private party, in which the private party assumes functions that are usually provided by the state and/or uses state property in providing those services” (Shambaugh & Matthew, 2016, p.153). According to The (OECD, 2019), PPPs are “long-term agreements between the government and a private partner whereby the partner delivers and funds public services” and can include both infrastructure assets as well as social assets.

In Botswana, PPPs are defined as “a contractual arrangement between a government institution and a private party whereby the private sector party provides public infrastructure and/or infrastructure related services and where the provision of such infrastructure and/or infrastructure is: (a) based on measurable output specification, (b) governed by a payment mechanism that provides payment only on delivery of services at required standards, (c)

accompanied by a transfer of financials and operation risk with consequential financial effects, and (d) demonstrates value for money to government” (MFED, 2009, p.3)

2.2.2 Infrastructure

Infrastructure according to Oxford Dictionary means physical assets, structures, facilities, systems, and networks that are necessary for a country to provide or support essential public services. These assets include and are not limited to bridges, roads, highways, sewage systems, and energy.

2.3 Types of infrastructure financing

Broadly, there are two ways in which infrastructure can be financed: budget appropriation and private-sector financing (Mello & Sutherland, 2018).

- I. Budget appropriation, in the context of this study, refers to authorisation from the country's legislation or budgeting body to incur expenditure for infrastructure funding. The expenditure is funded in a variety of ways, including general government revenue such as taxes, grants, or public borrowing. Public debt, if raised is classified as sovereign loans and may not be tied to specific projects (MFED, 2022b)
- II. Private-sector financing refers to the provision of infrastructure that is financed by the private sector, usually structured as project finance (Li et al., 2000). Project finance, according to Gatti (2019) is a funding structure in which lenders rely principally on future cashflows of the project to service their debt.

Increasingly, governments have adopted PPPs as the preferred method of funding infrastructure (OECD, 2015), especially in developed countries that have gained extensive experience over time (Mouraviev, 2012).

2.3.1 Different types of PPP models

There are different types of PPP models, and the extent of involvement and risk sharing between the private sector and public sector differs from project to project (World Bank, 2022b) (Kelesego, 2020):

- a) Public Works Contracts: This is when the private sector is contracted to perform a certain task, and they are absolved from the final service rendered to the end user.

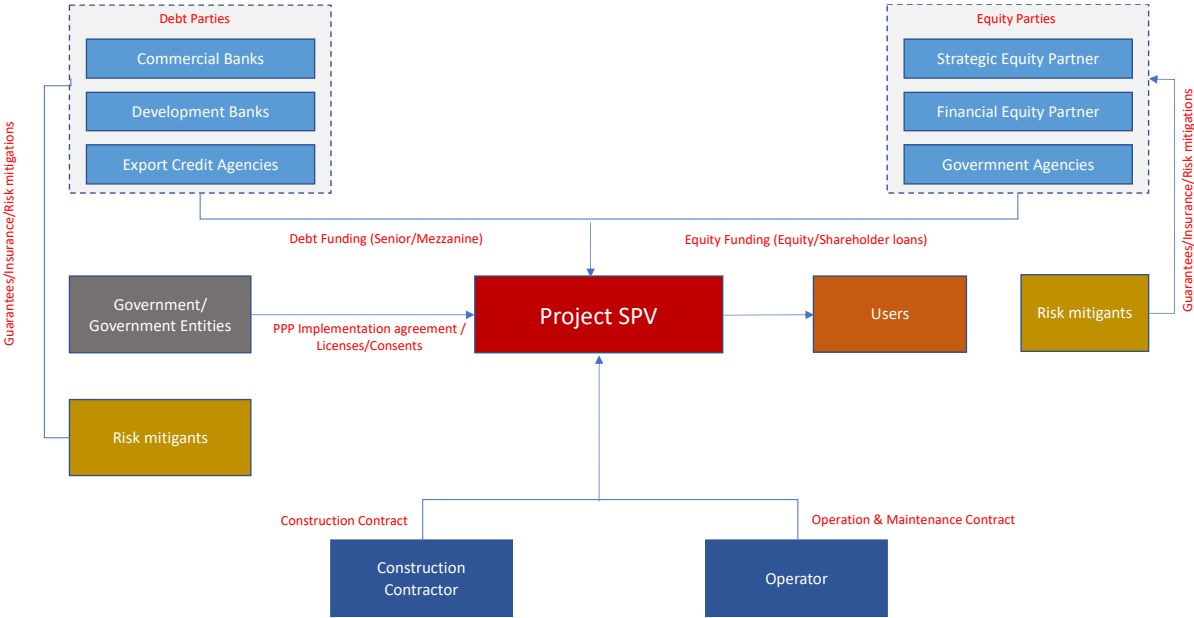
- b) Sub-contracts: The private sector is appointed to perform certain services, and they are fully responsible for the quality of the service provided. The private sector receives a fee for services rendered to the government or the public institution.
- c) Management contract: This is an agreement that details the conditions in which the private sector is to manage a range of activities on behalf of the public institution for a short period (typically 2-5 years).
- d) Leasing/Affermage contracts: The private sector is responsible for operations and maintenance and is responsible for providing the service, for which the public institutions pay a fee. The private sector is, however, not responsible for financing the assets.
- e) Build, Operate and Transfer (BOT) and Build, Operate and Own (BOO): The private sector is responsible for providing the service, and it builds and operates the assets from which it earns revenue by charging a fee. The private sector is not responsible for funding the asset. At the end of the agreement, the assets transfer back to the public institution under the BOT agreement, while under BOO, the private sector owns the assets.
- f) Design, Finance, Build, Operate, Transfer (DFBOT): The private party is appointed to build, finance, and operate a project on behalf of the public/government and transfer the asset back to the public or government after an agreed period. The difference between DFBOT and BOT is that in the former, significant financing is required from the private contract, while in the latter, the government or the public entity is responsible for financing the project.
- g) Joint Venture (JV): JV can take several forms, depending on what the parties want to achieve. (i) Shares in the company providing the public service can be divested to a private entity of a new holding company, which will hold assets of the public institution that is formed; or (ii) a partnership agreement is formed, in which the public institution and private sector agree to provide a specific service and share the cost and revenue of the project.
- h) Full divestiture/privatisation: This is when the public institution or government transfers all its interests and responsibilities to the private sector, which then assumes all the risks.

2.3.2 Structure of PPPs

PPPs are usually delivered using a special purpose vehicle (SPV) which allows for risk transfer from the government/public sector to different parties involved in the delivery of a particular

project/service and project financiers (Li et al., 2000). The SPV contracts with all third parties, and all cashflows, liabilities, and assets are ring-fenced and reflected in the SPV's financial statements (APMG International, 2022).

Figure 2.1: Typical structure for PPPs source Project Finance lecture slides



In a typical structure, the government’s contractual relationship is with the project SPV (World Bank, 2022a), a sterile company established specifically for the agreed purpose. Equity parties in the above structure are usually the sponsors who would have won the bid to provide a particular service and may include engineers, construction companies, and project developers, to mention but a few. Lenders include any third party that advances funding to the project SPV and may include commercial banks, DFIs, pension funds, insurance companies, etc. (World Bank, 2022a).

As indicated in the above structure, the project SPV normally signs an Engineering, Procurement and Construction (EPC) contract with a third party whose responsibility is to manage, design, and construct the required infrastructure. Usually, this contract is a fixed-price turnkey contract that transfers the construction cost and timely delivery to the contractor (Gatti, 2019).

The project SPV also enters into an Operations and Maintenance (O&M) contract with a party who takes delivery of the infrastructure and handles the maintenance for a set of years, guaranteeing the SPV that the infrastructure will be well maintained for the contract period

(Gatti, 2019). Both the construction company and operator may be affiliated with the equity parties (World Bank, 2022a).

2.4 Financing of PPP projects

Africa has a healthy pipeline of infrastructure projects spanning water, energy, sanitation, road, and transportation – all of which could be financed by PPPs. The current pipeline of infrastructure projects that can be delivered by PPPs is estimated at \$2.5 trillion (McKinsey, 2020), with most of them at the feasibility stage. PPPs are usually financed through project finance (OECD, 2015) in which an SPV, which is responsible for raising finance, is formed, and there is limited recourse to the promoters.

The SPV uses various instruments such as grants, project preparation facilities, infrastructure bonds, debt financing instruments, equity financing instruments, guarantees, and other credit enhancement instruments which can be used to finance infrastructure. The suitability of each instrument varies from project to project depending on the project's unique requirements, the risk associated with the project, who the sponsors are and the relationship they have with third-party funders, as well as the amount of equity that is put forward by the sponsors (Prussing, 2015).

The above instruments can broadly be divided into debt instruments and equity instruments and form part of the capital structure of the project. They are combined in such a way that the SPV achieves the most optimal capital structure. Capital structure refers to the mix of debt and equity in any given project (Du et al., 2019) or company, while the optimal capital structure, defined by Franco & Merton (1958), is the one that minimises the cost of capital and maximises the project value. The capital in any project (debt plus equity) should cover the initial capital costs and the working capital requirements during the initial period in which the project is not revenue generative and, as such, not able to meet its obligations (Chen et al., 2015).

Equity refers to the amount that is invested into the project by the project sponsors, governments, or third-party investors, either as share capital or subordinated debt. It is usually the most flexible form of capital and the ultimate risk bearing form, ranking second to none and intended to de-risk the project for other lenders. The amount that is contributed as capital is usually small relative to the amount required to deliver the project estimated at 25-30% by ICA (2018), 10-15% by Li et al. (2000), or 5-30% by the World Bank (2022a). As such, other pools

of capital are usually required to augment equity. Equity funding demonstrates the commitment of the promoters/shareholders, and it's usually required to flow in first (Gatti, 2019). Equity is used to cover the initial project costs, such as feasibility studies, environmental impact assessments, and preparation of the business and financial plans.

Debt financing means raising funding from third parties, and it needs to be repaid over time. Debt instruments include senior loans, mezzanine instruments, and bonds. Debt (with the exception of mezzanine and subordinated debt) is normally not a flexible form of capital as its repayments are fixed with covenants and need to be paid before distributions can be made to other capital providers (ICA, 2018).

Senior Bank debt is the predominant form of financing for PPPs (Li et al., 2000) and takes precedent over any other type of debt. Depending on the project size, projects can be funded by a single bank or can be syndicated across different banks. In a syndicated facility, banks are mandated by the SPV/borrower to structure, coordinate and manage the financing contract and invite other lenders to participate in the funding. These banks are referred to as the Mandated Lead Arranger (MLA) (Gatti, 2019), and they earn a fee for their services. The MLAs will typically underwrite the debt, which means that project sponsors are given the certainty of funds even if no other lender wants to fund the project. Bank funding is agreed upon and committed before the project starts, and after the initial flow of equity, the sponsor can then draw down the bank facilities against the cost to completion, with interest only paid on what is drawn. The undrawn balance is committed to the project, and as such, banks will normally charge a commitment fee to cover their regulatory costs.

Mezzanine Financing and Subordinated debt is another form of debt that usually ranks lower than senior debt but higher than equity. Usually, providers of this type of debt have a high-risk tolerance, but their mandates may not allow them to hold equity exposure – so to enhance their yield, they offer subordinated debt. This type of debt is usually more flexible compared to senior debt (ICA, 2018).

Bond financing is another form of debt financing that can be used to finance PPPs. Bonds are capital market instruments and can be listed or unlisted. Bonds tend to benefit PPPs and infrastructure funding, given a) their ability to raise longer tenors that perfectly match the life of the infrastructure project, which otherwise may not be available in the bank funding market, and b) to the extent that there is liquidity, they can provide higher overall funding capacity and

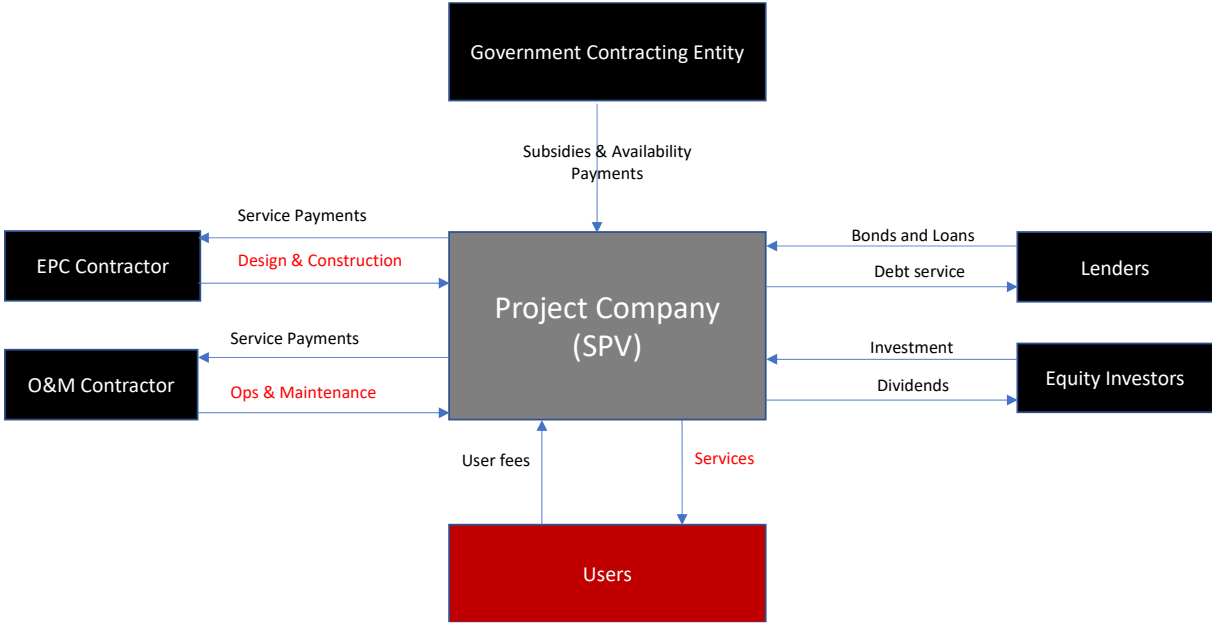
often at lower rates (Reichert-Facilides & Stein, 2013). The challenge with bond financing is that, unlike bank funding, the bond market is usually subject to rigid market standards for process and documentation, which makes bonds an inflexible funding instrument.

Guarantees, letters of comfort and credit enhancement instruments provide risk mitigation for lenders and normally result in increased appetite and reduced borrowing cost (ICA, 2018). PPPs are based on the notion that risk is allocated to parties best suited to manage, control and minimise the risk (Epec, 2011). In most cases, the private sector is usually able to manage and control risk, such as timely delivery of the project and within budget compared to the public sector. There are, however, risks such as political force majeure, regulatory risk, risk of early termination etc., that the private sector cannot manage or does not want to bear – as such, they will need some protections in the form of guarantees.

Guarantees can be provided by the government or a third party, such as a Development Finance Institution (DFI). Guarantees are binding (or potentially binding) agreements that compel the provider of the guarantee to satisfy certain obligations or protect the private party from defined losses if pre-specified conditions occur (Epec, 2011). As the specified event has not occurred, guarantees form part of contingent liability (Lu et al., 2019) for the party providing them. There are two main types of guarantees: (i) debt guarantees, defined as bidding agreements to service the debt obligation of the borrower in case of default, and (ii) performance guarantees, in which the government makes a contractual obligation to make the contracting public institution fulfil its obligations under the contract, such as take or pay agreement, supply agreement, etc. In PPPs, performance guarantees are the most common form of guarantees, and debt guarantees are rarely used since they may facilitate unbalanced risk allocation between governments and the private sector (Lu et al., 2019).

The SPV generates cashflow in two ways: (i) user charges in which the SPV is authorised by law to recover the cost through collection of fees from the public, and (ii) unitary payments in which governments repay the private sector directly and no user fees are levied on the public. The below picture shows the flow of financing and funds in PPPs.

Figure 2.2: Flow of financing and funds in PPPs source (World Bank, 2022a)



2.5 Who is financing African infrastructure?

In 2018, Africa received infrastructure commitments of about 101 billion USD, a significant increase from the 81.6 billion USD received in 2017 and a 38% increase compared to the 3-year average of 75.8 billion USD (ICA, 2018). According to the same report, infrastructure in Africa is mostly funded by African governments, accounting for 37% (37.5 billion USD) of 2018 funding, China with commitments of 26% (25.7 billion USD) of 2018 funding, and the private sector with commitments of 26% (25.7 billion USD).

A special category of debt funders is the Multilateral Organisations commonly referred to as Developmental Financial Institutions (DFIs). These funders are usually driven by their mandate, vision, and area of expertise, to mention but a few (Gatti, 2019), and include the World Bank Group, African Development Bank, International Development Association, etc.

Table 2.1: Commitment Trends by Source (\$bn), 2014-2018 Source (ICA, 2018)

Source	2014	2015	2016	2017	2018
ICA members*	18.8	19.8	18.6	19.7	20.2
China	3.1	20.9	6.4	19.4	25.7
Other Bilateral/Multilaterals	16.1	6.8	8.7	5.8	5.5
Private Sector	2.9	7.4	2.6	2.3	11.8
African governments	34.5	24	30.7	34.3	37.5
Total	75.4	78.9	66.9	81.6	100.8

*Infrastructure Consortium for Africa is a tripartite relationship between bilateral donors, multilateral agencies, and African Institutions

The energy sector continues to receive the lion's share of commitment in Africa, which is not surprising given that most people in Africa do not have access to electricity and account for over a third of the global population without access to power (McKinsey, 2020). With the exception of energy and ICT (information and communications technology), which made up about 94% of private sector commitments in 2018, the private sector has played a limited role in financing African infrastructure (ICA, 2018). Private-sector capital flows mostly to developed countries unless the projects have credit enhancers (such as guarantees from the host governments, or DFIs).

Table 2.2: Commitment Trends by Sector (\$bn), 2014-2018 Sector Source: ICA (2018)

Sector	2014	2015	2016	2017	2018
Transport	34.2	32.4	26.2	34.0	32.5
Water	9.4	7.5	12.2	13.2	13.3
Energy	24.1	33.5	20.6	24.8	43.8
ICT	2.4	2.4	1.7	2.3	7.1
Multi-Sector	5.3	3.1	6.2	7.3	4.1
Total	75.4	78.9	66.9	81.6	100.8

2.6 Overview of infrastructure funding in Botswana

The Government of Botswana remains a key player in infrastructure funding, devoting a significant portion of its expenditure budget to infrastructure. As part of its National Development Plan (NDP) 11, the government adopted a fiscal rule which aimed to (i) finance recurrent budget from non-mineral revenue and (ii) split mineral revenue with up to 60% to be invested in physical and human assets and 40% in financial assets for future generations (MFED, 2017a). Physical assets refer to economic infrastructure (roads, ports, airports, electricity) and social infrastructure (schools, hospitals, recreation, social protection, etc.).

All planned and approved infrastructure projects are included in the Public Investment Program (PIP), which forms part of the NDP and covers all projects undertaken by the central government, local government, and state-owned entities (MFED, 2017a). The NDP is then approved by parliament, and projects are funded from the annual national budget (which is financed by fiscal revenue or government borrowing). Government borrowing normally occurs through the issuance of government bonds, external budget support loans, or loans from multilateral or bilateral agencies (MFED, 2017a).

2.7 Evolution of PPPs in Botswana: The framework

The idea of PPPs in Botswana was first mentioned in the “2002/2003 budget speech and the National Development Plan 9 in which the government indicated that PPPs would be used extensively in the procurement and financing of infrastructure in Botswana” (MFED, 2009, p.1). There have been several initiatives aimed at increasing private sector participation, namely (i) privatisation policy adoption in 2000 and a privatisation master plan in 2005, (ii) approval of PPPs by Cabinet in 2009, (iii) a PPP policy and implementation framework in 2009, and (iv) the establishment of a PPP office in 2016.

According to (MFED, 2009), the aim of Botswana's privatisation policy and the privatisation master plan was to provide guidelines for growing the role played by the private sector in the economy. The policy sought to balance the private and public sectors to drive sustainable economic growth, improve service delivery, attract foreign direct investment and drive greater private-sector participation.

The privatisation policy provides for PPPs and recognises PPPs as one of the strategies that the Government of Botswana can use to drive the provision of infrastructure and services. Though the policy was approved in 2000, the drafting of the PPP policy commenced in 2005, with a draft submitted in 2006 and only approved by Cabinet in June 2009 (Bothale, 2016). Following the adoption of the framework in 2016, the government established the PPP Unit, which was tasked with driving PPPs and overall coordination (project planning, approval of financing and processes) to ensure the successful implementation of PPP policy (MFED, 2009).

To date, only two projects have been delivered using PPPs (MFED, 2022a). These are as follows:

- a. Ombudsman and Land Tribunal Office: A 10-year concession project which involved the construction of the Office of Ombudsman and Land Tribunal. The project term expired in 2017, and the building was handed to the government.
- b. SADC Headquarters Offices: This is a 17-year concession project which is ongoing. Under this project, the private parties constructed and funded the SADC head office, including facilities management.

The two PPP projects undertaken (SADC head office and Ombudsman) applied the unitary model, which means that the Government of Botswana paid the private sector that funded the project (Kelesego, 2020). Outside of the above-mentioned projects, the government (as part of its national development plan) identified several projects that can be delivered using PPPs. These projects are in various stages of development and currently undergoing assessment to determine whether they can be delivered using PPPs (MFED, 2017b).

Table 2.3: List of PPP projects in Botswana source (MFED, 2017b).

No	Project	Sector
1	Upgrade of the wastewater treatment plant and wastewater reclamation for potable use	Water
2	Converting coal to liquids to guarantee oil products security for Botswana	Energy
3	Construction and maintenance of Magistrate Court in Serowe	Accommodation
4	Construction of bulk petroleum products storage tank farm and ancillary installations near the Tshele hills in Rasesa, Katleng district	Energy
5	Construction of railway line from Mmamabula to Lephalale-South Africa for transportation of coal	Transport
6	Construction of a railway line from Moseitse to Kazungula	Transport
7	Construction of housing units for secondary school teachers across the country	Accommodation
8	Construction and operation of water supply pipeline from Kazungula to Moralane	Water
9	Construction and operation of irrigation infrastructure in Pandamatenga	Agro-industry
10	Construction and maintenance of head office accommodation and staff housing for Botswana Prisons services in Gaborone	Accommodation
11	Construction and maintenance of a prison farm and staff houses in Sepopa	Prison farm and accommodation
12	Construction and maintenance of prisoner rehabilitation centre in Lobatse	Prison facility
13	Construction and maintenance of student residences at Botswana International University of Science and Technology in Palapye	Accommodation
14	Construction and maintenance of the Francistown and Nata road	Transport
15	Construction and maintenance of the Maun-Mohembo Road	Transport
16	Construction of a state theatre facility for performing arts	Creative industry

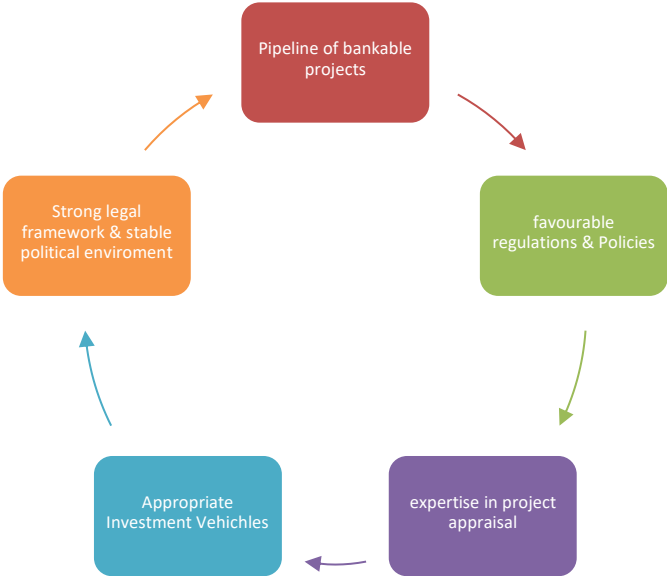

 Project Initiation Stage
 Procurement of Consultant Stage
 Feasibility Study ongoing
 Procurement of Private Party Stage

2.8 Conceptual Framework: Challenges in financing infrastructure development

According to McKinsey & Company (2016), the world needs 3.3 trillion USD every year to meet expected growth by 2030. This does not include additional requirements from the need to meet the UN Sustainable Development Goals, which could easily increase yearly spending by

up to 1 trillion USD. According to the same report, the world continues to underinvest in infrastructure, even though institutional investors such as pension funds and banks have about 120 trillion USD in assets that could potentially be invested to support infrastructure requirements. The question, then, is: given the large infrastructure needs and the potential supply of long-term finance, what is preventing infrastructure investments?

Figure 2.3: Key requirements needed for financing of Infrastructure



a. Lack of transparency and pipeline of bankable/investable projects

According to McKinsey & Company (2016) and Ehlers (2014), the largest constraint to funding infrastructure is finding bankable projects. Often, projects “are not properly designed, leading to returns that create the wrong incentives among the various parties” (Ehlers, 2014, p.i). Many governments and developers lack the capabilities, technological and efficient management skills (Li et al., 2000) to design and implement projects with commercial potential (McKinsey & Company, 2016) (Ehlers, 2014). The reasons why some of the projects are not bankable are as follows:

- Inadequate risk-adjusted returns
- Weak feasibility study and business plan
- Long timescale with delays in obtaining licenses and permits
- Inability to agree on risk allocation
- Inability to secure offtake agreements and guarantees
- High transaction costs

b. Unfavourable regulations, policies, and cross-border investment rules

Regulations such as Basel III reserve requirements and solvency requirements, investment guidelines and regulate the amount that can be invested in infrastructure. These regulations requires high-risk allocation for infrastructure and limited cross-border allocation, (McKinsey & Company, 2016)

c. Limited expertise in appraising and funding infrastructure projects

Infrastructure projects are usually long-term and complex and require a lot of expertise and due diligence (both legal and financial) (Ehlers, 2014). Financing infrastructure also requires patient capital, given the long-term repayment profile; natural providers of long-term capital (such as pension funds, life insurance companies, and sovereign wealth funds) usually don't have the expertise, resources, and time to assess projects. They often have to rely on the services of third parties, such as engineers, transactions specialists, etc., to appraise projects which can comprise up to 5% of the project costs (McKinsey & Company, 2016).

Another avenue for sourcing patient capital is through the capital markets' 'project bonds', which offer a means to raise long-tenor bonds beyond what banks can provide, higher overall funding capacity, and often lower interest rates (Reichert-Facilides & Stein, 2013). According to the same report, the ability to raise project bonds in practice is relatively complex, given (i) the presence of placement risk until financial close, and (ii) their subjection to more rigid market standards for process and documentation for the debt raised. Infrastructure financing, on the other hand, given the high level of uncertainty, requires non-standardised contracts that are a result of negotiations between different parties, with a necessity for funding to be made available against the cost to completion (Bolomope et al., 2020).

d. Lack of appropriate investment vehicles

Infrastructure assets are usually large-scale transactions that require enormous funding, with ticket sizes for investing directly usually set very high and very prohibitive. As such, only large institutional investors can participate and fund infrastructure directly (Della Croce & Yermo, 2013). Collective investment vehicles that allow for pooling capital, i.e. infrastructure funds, are available – however, they have exorbitant fees and are therefore less popular.

e. Weak political and legal framework risk

Infrastructure projects are long-term commitments, and investors will only be willing to invest if there is (i) a "sound coherent and trusted legal and regulatory framework" (Ehlers, 2014, p.3) and (ii) good governance (OECD, 2016). Most emerging economies have a weak regulatory framework that doesn't support private party participation, and have different laws, regulations, and policies that are not harmonised with judicial inconsistencies, corruption, and mismanagement (OECD, 2016) (Bolomope et al., 2020).

2.9 Review of the empirical literature

2.9.1 Driving forces of PPPs

Over the past few years, PPPs have increased in popularity in developing countries and are seen as the most viable means of funding infrastructure. Many studies have identified several drivers of PPPs. Arimoro (2018) performed a study in Nigeria and highlighted that a huge budget deficit has seen Nigeria adopt PPPs to fund infrastructure development. Yuang et al. (2010) undertook a case study using two Metropolitan Transportation systems to understand the driving forces of PPPs in financing transportation infrastructure in China. The study used structured interviews and identified financial constraints as one of the five common factors driving PPPs in China. Kavishe & Chileshe (2020) undertook a similar study to see what is driving the adoption of PPPs in the delivery of housing projects in Tanzania. Out of 19 forces identified using semi-structured interviews, the study concluded that lack of financial capacity is one of the top three drivers of PPPs in Tanzania.

Other studies, such as those of Mouraviev (2012), Kakabadse et al. (2007) and Kavishe & Chileshe (2020), have identified value for money as the biggest driver for PPPs. Value for money, according to Mouraviev (2012), means archiving the best possible combination of benefits and costs in delivering services to the public. Within the context of PPP, value for money is the ability of PPPs to deliver cheaper and better public service. According to Mouraviev (2012), value for money remains the most important factor when it comes to PPPs.

There is also the issue of government public inefficiencies, brought about by the government's inability to manage large-scale infrastructure projects (Mouraviev, 2012) (Yuang et al., 2010)

(Kavishe & Chileshe, 2020) which then drives PPPs. PPPs bring about much-needed innovation, superior management, and technological expertise.

Gawel (2011) identified politics as the main driver of PPPs, and that PPPs are not theoretical optimisation exercises but rather a result of a political decision-making process, which then influences which areas and which forms of PPPs are undertaken. In most cases in which politics drives PPPs, the factor of value for money does not hold.

2.9.2 Challenges in implementing PPPs in Africa

The literature cites several key challenges to implementing PPPs in Africa, including poor and inadequate legal frameworks, corruption and political instability, and lack of financing (AfDB, 2020) (The World Bank Group, 2021) (McKinsey, 2020). Bolomope et al. (2020) performed a qualitative study to identify key challenges to accessing finance from local financial institutions in Nigeria. The study identified six challenges: inconsistent policy, low capital base needed to fund long-tenor projects, weak viability of the identified projects, lack of capacity to manage the projects and related activities, poor legal framework, and public perception of PPPs. Their results are similar to those of Agrawal et al. (2011), who undertook a study on key constraints to private financing of PPPs in India: in addition to the constraints identified by Bolomope et al. (2020), they found that delays in awarding the contracts and inadequate administrative capacity were key constraints. This is consistent with the findings of Carbonara & Pellegrino (2014), which aimed to highlight the opportunities and challenges in financing PPPs in Italy. The study identified two critical challenges, namely the burdensome administrative procedures and the legal frameworks.

Osei-Kyei & Chan (2017) undertook a study using an empirical questionnaire survey to identify critical factors needed to attract private-sector funding of PPPs in developing countries. The study targeted PPP experts, and survey responses were analysed using the Mann-Whitney U. The study identified three important factors that are needed to attract private-sector funding: (i) a positive attitude from the government toward private investments, (ii) political support and acceptability for PPPs, and (iii) favourable legal frameworks and policy and political stability. The same study concluded that having a competent PPP unit is of low importance. This is contrary to the findings of Moszoro & Krzyzanowska (2008), who undertook a review case study of the City of Warsaw in implementing its PPP. They concluded that a key challenge in PPP implementation is the lack of a PPP unit responsible for coordinating activities between

the government and private investors, which can also be responsible for regular performance evaluation.

2.10 Chapter Summary

In 2018, Africa received total infrastructure commitments of 100.8 billion USD, mostly funded by African governments at 37% of commitments, followed by China at 26% (ICA, 2018). The current infrastructure pipeline in Africa is estimated at 2.5 trillion USD (McKinsey, 2020), with most of them at the feasibility stage. Africa faces challenges in funding its infrastructure requirements, currently estimated at 4.5% of GDP (World Bank, 2019), and more and more governments are now exploring PPPs to help finance these requirements. The most common form of financing PPPs is through project finance (OECD, 2015), in which a sterile SPV is used.

Botswana, like all African countries, faces the same challenges in delivering infrastructure. Infrastructure in Botswana is predominately funded by the Government of Botswana, but the government is now looking at the private sector to finance infrastructure rollout and maintenance through PPPs. The idea of using PPPs to fund infrastructure was first mentioned in 2002/2003; however, only two projects were delivered through PPPs.

While several studies have explored challenges in financing PPPs generally, there has been considerably less exploration of Botswana-specific challenges.

CHAPTER 3

METHODOLOGY

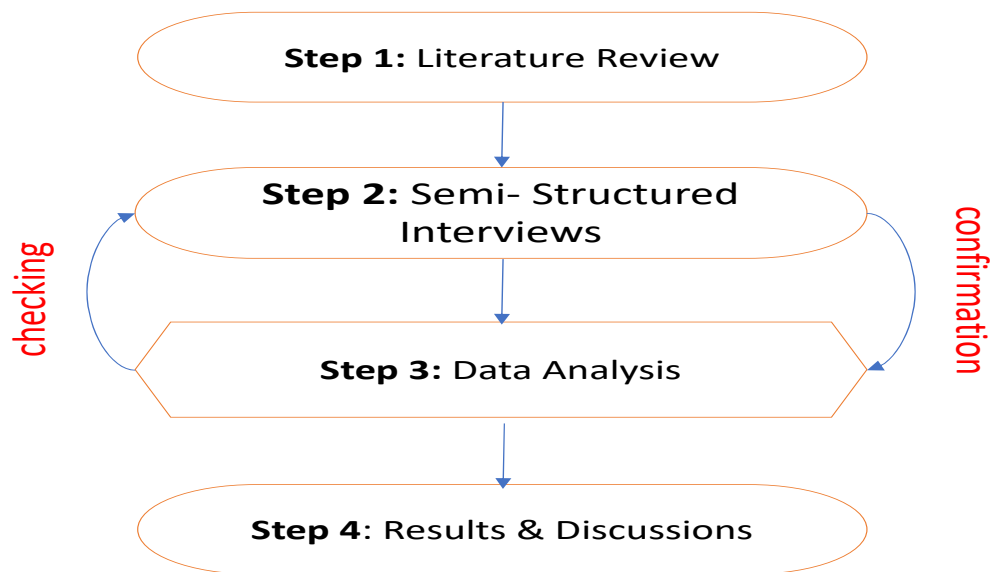
3.1 Introduction

This chapter presents the research methodology adopted by this study. As PPPs in Botswana are still in their infancy with limited research, the study is exploratory. This section explains why the study adopted non-probability sampling and discusses the issues of trustworthiness and credibility. Further, this section acknowledges the limitations of the research design, analysis and methodology, as well as the strategies adopted to mitigate the limitations.

3.2 Research Approach

The research takes a qualitative approach and follows the interpretive paradigm, which allows the researcher to develop meanings from participants' experiences and views. Though common, PPPs are not widely researched in Botswana, so the study adopted a qualitative approach that generally works with topics with limited research supporting them (Mansilla & Vassallo, 2020). Qualitative approach enabled in-depth insights into some of the challenges faced by the private sector when funding PPPs. Qualitative research is also useful for generating new ideas, which is important as the results of this study will contribute to the body of knowledge that the government might use in crafting its national strategy for involving the private sector in financing infrastructure projects. The study's research methodology followed steps adopted by Kavishe & Chileshe (2020).

Figure 3.1: The Research Framework. Source: Adopted from (Kavishe & Chileshe, 2020)



3.3 Research design

Research design involves a comprehensive plan for data collection, aimed at answering specific research questions. The study adopted a qualitative approach, and semi-structured interviews were used for data collection.

3.3.1 Population, sampling, and sample size

PPP is a relatively new concept in Botswana, and is under-researched. For under-researched topics, it is advisable to undertake an expert/purposive sampling procedure (Kavishe & Chileshe, 2020). This is to ensure that respondents are selected to provide the most information-rich data possible (Morrow, 2005) based on the research questions. Accordingly, the study adopted a non-probability sampling technique and interviewed experts in the field. An expert in this study is defined as an individual with demonstrable experience and expertise in PPPs and/or financing, with at least 10 years of industry experience; the experts interviewed in this study included Botswana Government officials within the PPP office, advisors, academics, and capital providers (such as pension fund and asset managers) all who are publicly known given the small number of experts in this field.

3.3.2 Data Collection

As per the research framework adopted by Kavishe & Chileshe (2020), semi-structured interviews were conducted (given that this is a relatively new and “exploratory” concept in Botswana, and is generally under-researched). Semi-structured interviews combine the

advantages of unstructured and structured interviews and provide an opportunity to generate reliable data that is comparable, but also allow the respondents to comment on the subject, drawing from their experience and allowing the conversation to progress without being limited by predetermined questions (Kavishe & Chileshe, 2020). After obtaining ethical clearance from the university on the 7th of September 2022, with the consent of the respondents, interviews were conducted on Microsoft Teams between September and November 2022. At the beginning of each interview, participants were reassured of confidentiality and that their identities will not be disclosed.

In designing the semi-structured questions, the study followed the interview protocol refinement (IPR) framework adopted by (Castillo-Montoya, 2016), which comprises four phases, namely:

- Phase 1: Ensuring that the interview questions align with the research questions. This was achieved with a protocol matrix to map the interview questions against the research questions of the study. Phase 1 is important, as it helps to identify the potential information gap before data collection starts.
- Phase 2: Constructing an inquiry-based conversation and ensuring that questions are clear, short, and easy to understand. The questionnaire was divided into four sections, namely (i) introductory questions, in which covers the respondent's background, qualifications, and experience, (ii) transition questions, which moves the discussion from introductory questions to key questions, but allow the conversation to flow smoothly, (iii) key questions around what the study is trying to find out, that are linked to the research questions, (iv) closing questions, which allow the respondents to reflect on the interview and add anything that they feel is relevant and was missed during the interview.
- Phase 3: Receiving feedback on interview protocols through close reading and think-aloud activities. This is important as it allowed refining the questions before sending them out to participants
- Phase 4: Piloting the interview protocol is asking people who share similar characteristics with the study and carries interviews under real condition.

The study only adopted Phases 1 to 3, as Phase 4 was not possible to implement given the unavailability of respondents with whom to pilot the interview protocol. Two main challenges were encountered during the data collection. Firstly, pursuing PPP experts with busy work

schedules to participate in the study was difficult and some were not available and some of the meetings which were booked well in advance were postponed or even canceled. The second challenge was around the limited number of participants in Botswana with relevant PPP experience which meant that the finding of this study is limited only to those few expert's opinions. This inherently means its difficult to verify the opinions across a larger population sample. The interview guide used for the data collection is included in Appendix 1.

3.3.3 Data analysis

The study adopted thematic analysis of the data collected, which “is a method for identifying, analysing, and reporting themes/patterns in within a set of data” (Braun & Clarke, 2006, p.6). A theme is defined in the same study as a “patterned response or meaning within the data set”. Thematic analysis is flexible and allows researchers to see and make sense of a collective of shared meanings and experiences (Braun & Clarke, 2012). However, the authors caution that the themes should be relevant in answering the research questions.

According to (Braun & Clarke, 2006), there are two types of approaches that researchers can adopt to identify themes, namely (i) inductive approaches, which drive themes from the researcher's data, and (ii) deductive approaches, which use a pre-existing theory framework to identify the themes.

The study adopted inductive thematic analysis and derived the themes from the data. According to (Kiger & Varpio 2020, p.3), inductive thematic analysis allows researchers to gain a richer understanding of a phenomenon and “provides a broader, more expansive analysis of the entire body of data.” Data was analysed by following the following key steps:

1. **Data familiarisation:** This involved repeatedly listening to the interview recordings and actively reviewing the notes. Interview sessions were recorded on Microsoft Teams, transcriptions of the audio recordings were extracted and then checking the transcripts against the actual recordings assisted with data familiarisation (Kiger & Varpio, 2020).
2. **Generating initial codes:** This helped with organising the data and followed from the first step. It involved identifying potential data items of interest, connections between data items, etc. The study’s research codes were inductive, meaning they were derived from the source data. Careful consideration was applied so that the codes are well-defined and not overlapping (Kiger & Varpio, 2020).

3. Searching for themes: This involved going through coded data to identify significant themes that can assist in answering the study research questions (Braun & Clarke, 2006). According to Kiger & Varpio (2020), themes do not easily emerge from the data and the researcher is required to analysis how the different codes relate to one another; they should be linked, and reflective of the entire data set.
4. Reviewing themes: This is to ensure proper fit and involves going through the themes and codes to confirm whether they are related, and whether each theme has adequate supporting data.

3.3.4 Trustworthiness and Credibility

Testing for trustworthiness and credibility is important in qualitative research. (Connelly, 2026, p 435) defines trustworthiness as “the degree of confidence in data, interpretation and methods used to ensure the quality of a study”

As part of data collection, semi-structured interviews were conducted. In their research, Mansilla & Vassallo (2020) mention that semi-structured interviews suffer from cognitive bias and overconfidence, which can decrease accuracy. Conventional content analysis is not based on a theory of prior research, and coding is developed from the text; as such, there is a possibility of not identifying all key categories’ “trustworthiness” (Hsieh & Shannon, 2005).

However, confidence was derived in that (i) purposive sampling was adopted and experts in the field interviewed, and (ii) trustworthiness was addressed by interviewing widely as possible to reduce the bias. On credibility the study target those experts with at least 10 years working experience.

3.4 Summary

The chapter on research methodology has described the research approach for this study as qualitative, following the interpretive paradigm. The justification for this research approach stems from the fact that PPPs are a relatively new concept in Botswana and are not widely covered. Given the limited availability of research on the subject and the need to collect as much information-rich data as possible, we adopted purposive sampling, in which people with PPP and financing experience were identified and semi-structured interviews conducted. This allowed the experts to share as much as possible without being limited by predetermined

questions. This chapter has also outlined how the data was analysed, and outlines issues of data reliability and validity as well as limitations of the research.

CHAPTER 4

RESEARCH FINDINGS, ANALYSIS, AND DISCUSSION

4.1 Introduction

Chapter 4 presents and discusses the findings from the semi-structured interviews aimed at addressing the research problem of this study. This chapter is divided into two sections: the first section describes the participants, while the second section discusses the challenges identified by the methodology that is explained under data analysis.

4.2 Description of participants

Due to the infancy of PPP projects in Botswana, a total of 20 potential participants were purposively identified; however, only 13 participated in the study. The sample size was considered sufficient and conformed with other studies, such as Ajayi et al. (2016) and Bolomope et al. (2020) who interviewed between 5 and 25 participants. Furthermore, Kavishe & Chileshe (2020) reached data saturation at the 10th interview and terminated data collection.

The interview participants were asked whether they had ever been involved with/appraised/reviewed/structured/financed any PPP project. This, however, was not an exclusion criterion, and for those not involved but to understand if there was a particular reason why they were not involved.

To obtain information that was applicable to the wider PPP ecosystem, different experts across the different professions within the PPP ecosystem were represented. These included financial intermediaries, i.e. bank and asset managers, advisors, universal asset owners, and public officials. Table 4 shows an overview of the participants. Each interview session lasted between 40 and 60 minutes, and permission to record was obtained from the respondents before the interview.

Table 4.1: Overview of the participants

Categories of the participants	Total number of experts
Public/SOE officials <ul style="list-style-type: none"> • 1 PPP Office • 1 Botswana Stock Exchange 	2
Financial Intermediaries <ul style="list-style-type: none"> • 2 Asset managers • 1 DFIs • 2 Banks 	5
Universal Asset Owners <ul style="list-style-type: none"> • 2 Pension funds • 1 Insurance Companies 	3
Advisors <ul style="list-style-type: none"> • 2 Advisory firms • 1 lawyer 	3
Total	13

Notes

- All the respondents have over 10 years of industry experience
- All respondents occupied middle to senior management positions
- All respondents have a good level of PPP

4.3 Findings

4.3.1 Suitability of the Public Investment Program for financing PPPs

The thematic analysis of the responses to the question around the suitability of the Public Investment Program identified the following as challenges: (i) unfamiliarity with the PIP process in selecting projects for PPP, and (ii) inadequate stakeholder engagements on projects selected for PPPs before the finalisation and approval of PIP.

(i) Unfamiliarity with the Public Investment Program (PIP) process in selecting projects for PPP

From engaging with the research participants, it was evident that the process followed by the government to identify and submit projects for prioritisation by the National Planning Commission is clear, however what is not clear is how PPP projects are identified from the submitted projects. For instance, Interviewee 7 highlighted, *“These projects are identified through thematic working groups within the government or by ministries. What is not clear is how projects are then divided between those which will be funded through the national budget or delivered through PPP.”*

There is a perception that PPP is used as a default/afterthought for those projects that were not prioritised to be delivered through the national budget. Interviewee 12 said:

“I believe the government is focusing on PPPs because they are having challenges in funding projects through the normal development capital project program and the choice of selection of PPP projects now is not on its own merit but where government is struggling to fund. I mean the framework talks about the pre-screening of projects, I’m not sure how many of those projects have been pre-screened. I’m not sure if there is a clear evaluation framework and if it’s consistent.”

(ii) Inadequate stakeholder engagements on projects selected for PPPs before the finalising and approval of the PIP

Research participants have revealed that, for those projects that are identified to be delivered through PPP, there is no private sector engagement to determine whether it’s possible for the projects to be delivered via PPP before finalising and submitting PIP for approval by the national assembly.

Interviewee 9 said that *“before projects are added to the PIP, there is no market or high-level appetite testing to say: Is there interest? Do we have the capacity? Do we have the capability? Should we deliver these projects through PPPs, or they should be funded through the national budget”*. This sentiment was supported by Interview 12, who highlighted that the *“National Development Plan comes all the way from the local level, and then when it gets to the National Planning Commission, they sit in their room and bring other bureaucrats and no people from the private sector to discuss these issues.”*

Research participants further revealed that due to this lack of proper engagement, once these projects are approved as part of the PIP approval process, there is a high probability that the project might be structured sub-optimally than if the private sector was involved. For instance, Interviewee 8, when talking about private sector involvement, said *“we only bring them at the tail-end when you have actually approved and when you want to implement – you may realise that there is something that could have been done differently if you had engaged the private sector. If you had engaged with the private sector adequately, they probably would have made you wiser in terms of scope and other things that you put into the project.”*

4.3.2 Private sector participation in the delivery of infrastructure in Botswana

In the thematic analysis of the interviews, the following challenges that affect private sector participation in funding PPPs in Botswana were identified: (i) lack of technical expertise and capacity issues, (ii) unclear legal/regulatory frameworks, (iii) lack of clarity around mandates for statutory bodies, (iv) length of execution, and (v) inadequate stakeholder engagements.

(i) Lack of capacity and technical expertise to design, structure and appraise projects

According to the interviewees, most of the financial institutions (including commercial banks, pension funds, asset managers and insurance companies etc.) do not have dedicated infrastructure origination and credit teams with technical expertise and capacity to structure, review, and appraise PPP projects. PPP projects are large-scale and complex projects that require significant capital investment, and the lack of technical abilities and capacity of the financiers impedes their credit appetite for PPPs. According to Interviewee 7, *“Commercial banks have not invested resources to build the required skills in-country. They mostly rely on head office support who sometimes have very little understanding of the local market dynamics, or are discouraged because of the smaller deal size. The locally-based teams are generalists with limited technical ability to structure and appraise PPPs.”* As a result, participants have pointed out that financiers tend to make up for this lack of understanding by requiring significant de-risking structures, i.e. the government provides guarantees for PPP projects without considering each project on its own merits. As a result, *“The private sector is always quick to demand a Government Guarantee. There are many ways in which one can de-risk the project; of course, they come at a cost that needs to be factored in. My preference is that a guarantee should not be on the table as a starting point, but only on an exceptional basis”* (Interviewee 12).

The issue of technical expertise was also raised in relation to the government. Participants pointed out with concern that the PPP office is not well-resourced and doesn't have the capacity to advise the responsible ministries and departments. Further, they pointed out that ministries responsible for project selection and management of PPPs lack the requisite capacity and expertise to select and manage PPPs with commercial viability.

(ii) Shortcomings in the legal framework and policies

Researchers have also pointed out that until recently, Botswana didn't have specific regulations that govern PPP procurement. PPP was governed by a PPP policy that was approved by the cabinet in 2009. The research participants pointed out that procurement for the longest was governed by the PPAD act, which made no specific reference to PPP. Projects were sometimes mentioned, but the legal framework was not accommodative, and according to Interviewee 1, *"you can see that sometimes we ran far ahead of legislation."* The government recently passed the new Public Procurement Act, however the actual legislation has not yet commenced. The Public Finance Management Act, which deals with the control and management of public money, public supplies and other related matters, also needs to be *"reviewed so it explicitly addresses the issues of contingent liabilities, such as guarantees arising from PPP projects"* (Interviewee 10).

(iii) Lack of clarity around mandates and responsibilities for government statutory bodies and ministries

Lack of clarity around mandates and delegation of responsibilities was raised as a key challenge for the private sector. Roles and responsibilities of different ministries and statutory bodies are not clearly communicated, and there is a lack of coordination among departments. Interviewee 5 worked for a company that participated in a renewable energy tender that was floated by the government, and shared their experience as follows: *"We floated the first tender for renewable energy here, and that tender was floated by Energy Affairs, which is the Ministry. It went through people submitted, but it couldn't be awarded because it turned out that in Botswana, Botswana Power Corporation¹ is the only company that can distribute electricity. So, all it meant is that process stopped as the Energy Affairs and the Ministry of Mineral Resources and Energy had no mandate to do it except to do it through Botswana Power Corporation."* Interviewee 5 further indicated, *"The workaround was that the tender got cancelled and issued by Botswana Power Corporation years later."*

The above observations are also supported by Interviewee 1 in his closing remarks, when he said that it's important to distinguish between the *"role clarity between the Ministries and the appointed agents, as to what role is the Ministry playing and what role is the agency playing; what should be taken to the Ministry for approval and what can be done by the agency. I think*

¹ Botswana Power Corporation is a 100% government-owned company established by an Act of Parliament with the Ministry of Energy as its line Ministry

that's the challenge we are facing so far, in that some decisions are more policy-oriented and you might head into trouble going forward because you might find that at operationalising stage the policy would work against you."

(iv) Snail pace progress of registered PPP projects and lengthy time of execution/procurement

Research participants have highlighted that projects are registered with the PPP office and published in the list of registered projects, however there is very little progress with most of the projects still in the initial stages. Once the projects are registered, very little is achieved. Interviewee 1, when talking about the lack of progress, said, *"...and note this word, it's like they threw it into the PPP arena, and they forgot about it"*.

The length of time taken to award tenders is relatively long. It involves multiple submissions, extensions, and cancellations, which is discouraging given the amount of time that goes into bid preparations. Interviewee 4, when sharing his experience about the PPP project in Botswana, talked about the Tshele fuel storage facility and highlighted that, *"there was the Tshele Hills tender and prior to it being pulled out regarding issues of National Petroleum Fund, we had shown interest to participate and went as far as presenting to the people assessing the potential funders into the project. This project was cancelled and now it has come back and is looked at by Botswana Oil."* Interviewee 3, when talking about the length of execution time, said, *"sometimes there is just a general lack of urgency which from the private sector costs you money, but it doesn't come like that from the government perspective where the urgency is perhaps not as crucial."* This creates uncertainty for the private sector.

(v) Insufficient engagement with stakeholders

Research participants also pointed out that the absence of broad-based and early stakeholder engagement is a great inhibitor. For the most part, engagements remain led by the private sector, with little reciprocal information from the government. Until recently², there has been very limited interaction with the private sector to understand the types of projects they have an appetite for, and how they can be structured to maximise appetite from the private sector. This leads to the development of projects that do not meet the private sector's risk-return

² Government of Botswana hosted a conference on Project Finance and Public Private Partnerships

requirements. According to Interviewee 13, *“The process by which projects are identified to be delivered by PPP remains unclear. The government also shares very little information relative to what the private sector would require to appraise/review PPP projects.”*

4.4 Discussion of findings

4.4.1 Suitability of the Public Investment Program for financing PPPs

The findings from this study contribute some insights into the Public Investment Program. There is inadequate participation of the private sector in selecting projects for PPPs, with the private sector only being involved after the Public Investment Program has been approved by parliament³. The consequence of this is that some projects that are included in the PPP-approved projects are projects that the private sector has no appetite to fund, as they believe they don't have commercial viability. For PPP to work, there needs to be sufficient communication and stakeholder engagement (Bolomope et al., 2020), which is not the case here.

Another shortcoming of the Public Investment Program is that there is no separate process for those projects that are identified to be delivered through PPP – as such, projects are not subjected to a pre-feasibility study to really test whether they can indeed be delivered through PPP. Ultimately, PPP projects follow the conventional process of including projects in the Public Investment Program, with projects submitted on the basis of sketchy information without in-depth detail (MFED, 2022b) which is required for the private sector to appraise the projects. The private sector usually receives detailed information about a project at the tender procurement stage, which is rather late in the process; in some instances, the projects are not structured in such a way that the private sector is able to take a view. This is one of the reasons why projects in Africa fail to attract private-sector funding (McKinsey, 2020).

4.4.2 Private sector participation in the delivery of infrastructure in Botswana

There have been several studies aimed at understanding why there is limited investment in infrastructure investment, despite the availability of different pools of capital that could

³ Parliament approval pave for engagement with Ministry of Finance to fund projects.

potentially plug the gap. Globally, there continues to be an infrastructure funding gap, and Botswana is no exception. The study has identified five key challenges affecting private-sector participation in funding PPPs in Botswana, namely: (i) lack of technical expertise and capacity issues, (ii) unclear legal/regulatory frameworks, (iii) lack of clarity around mandates for statutory bodies, (iv) length of execution, and (v) inadequate stakeholder engagements. The findings align with the existing literature such as Ehlers (2014), OECD (2015), Bolomope et al. (2020), Gupta & Verma (2020), and Osei-Kyei & Chan (2017).

Contrary to these studies, corruption, political risk, and lack of available capital to fund projects were not identified as factors affecting PPP infrastructure financing in Botswana. This is because Botswana is regarded as one of the least corrupt countries in Africa, with a stable government and most importantly an independent and functional judicial system. All of these are conditions for a successful PPP rollout (Osei-Kyei & Chan, 2017).

On the availability of funds, the research findings are consistent with the findings of McKinsey & Company (2020) and MFED (2022b), both of which have highlighted that the current infrastructure gap is not caused by a lack of funds. Botswana has several institutional investors, such as commercial banks, retirement funds, insurance companies, and asset managers, who have liquidity and can finance infrastructure assets. Additionally, given Botswana's investment grade rating, the country is also on the radar of other international universal asset owners who are looking to deploy long-term patient capital into an investment-grade-rated country.

The study, however, does reveal some challenges that the private sector is facing in trying to finance PPPs in Botswana. Firstly, the study reveals that the government does not have the required capacity and technical expertise to design, structure, review, and manage PPPs. In Botswana, the PPP Unit is responsible for advising public departments and ministries, while departments and ministries are responsible for managing PPP. Both the PPP Unit and the respective ministries do not have the capacity to advise and manage PPPs. This is considered a hindrance by the private sector and is in line with the recommendations from Osei-Kyei & Chan (2017) that developing countries should build the capacity and competency of public departments. The private sector is also sceptical about the government's ability to deliver and adequately manage infrastructure projects in a timely way. This is understandable, given that some large-scale government projects (such as the national airport, Morupule power station and Palapye Fengyue glass project) were ill-executed, out of budget, and not within the agreed timeframe. The issue of technical expertise is not only applicable to the government, but to the

private sector as well. The private sector in Botswana has not invested adequately in human capital, and the country has very few people who are experts. This is not surprising, given that PPP is a relatively new concept in Botswana.

Like many studies on this topic, such as Osei-Kyei & Chan (2017), Cheung et al. (2012) and Chan et al. (2010), this study emphasises the importance of well-defined laws and policies aimed at regulating PPPs. The new Public Procurement Act was recently approved by Parliament, however it has not yet commenced. As such, there is an urgent need to operationalise it. Other pieces of legislation, such as the Public Finance Management Act, also need to be quickly reviewed to address contingent liabilities, such as guarantees that are common when dealing with PPPs. This is not to say that the current regulations do not allow for PPPs as they do. However, the lack of clarity increases the risk for investors, lengthens the procurement process, and reduces the pool of available investors.

Given the interdependency of regulation/policies and mandates for different statutory bodies, it's not surprising to find that clarity is still needed around mandates for different statutory bodies, ministries, and the PPP office. There needs to be a holistic review of laws and regulations alongside mandates of the different statutory bodies, so that neither process front-runs the other. As is the norm in developed markets, there should be a continuous review process of PPP laws and mandates of regulatory/statutory bodies, to minimise bottlenecks.

This study also reveals that the PPP procurement process is lengthy and discouraging, with ever-changing terms of reference and submission dates. While PPPs are complex projects and should follow a cautious approach, a longer time to appoint results in higher transaction costs (Chan et al., 2010) due to billable hours by professionals such as lawyers, consultants etc. Slow tendering and awarding processes also deter the private sectors (Flannery et al., 2017) and in Botswana, the process is always protracted with PPP projects like the Gaborone wastewater treatment plant [tender floated 16 March 2022] and Tshele Hill [tender floated in 2017 and canceled, and floated again on 7 February 2022] still at the tender stage. The solar IPPs tender, for the two 50-megawatt solar plants, was initially floated on 4 February 2020: only one was concluded and awarded in 2022, while the other one is up for a re-tender.

Finally, there is the issue of stakeholder engagement, which appears to be inadequate. There is not enough consultation around potential projects and how best they should be structured to attract maximum appetite from the private sector. Additionally, insufficient stakeholder

engagement is an impediment to the potential collaboration between the government and the private sector. According to Bolomope et al. (2020), it is important for developing countries to continually raise awareness of the country's PPP procurement strategy, so that there is adequate buy-in and clarity around the roles of each party.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a summary of the study and discusses policy recommendations for addressing the challenges identified in this study. As PPP is a relatively new concept in Botswana, there is a need to continue building the body of literature specific to Botswana. As such, the last sections provide avenues for future studies.

5.2 Summary and Conclusion

Botswana faces challenges in financing, maintaining and delivering infrastructure assets, as well as maintaining, upgrading, and meeting operational obligations of the existing infrastructure. As such, “the quality of some infrastructure at present is lagging behind many of its peers” (AfDB, 2014, p,12), while some of the infrastructure assets are operating below their intended capacity. On the back of this, Botswana’s cabinet approved the country’s PPP framework in 2009, and more recently, the parliament approved the Public Procurement Act, which for the first time, makes reference to PPP. Though approved, the act has not commenced, and policies related to the act are still in draft form. It is the government’s intention to allow the private sector to play a leading role in financing infrastructure projects through PPPs.

The purpose of this study was two-fold: firstly, to assess whether the Public Investment Program (PIP) for projects is suitable for PPPs, and secondly, to identify factors, if any, that affect private sector participation in financing PPP projects. Recommendations from this study will help the government as it looks to drive increased participation from the private sector. The findings of the study indicate that the current PIP is not suitable for PPP projects, as there is little private sector involvement, and the information submitted for PPPs cannot be the same as for other projects that will be government funded. The study also found five challenges to the private sector: (i) a lack of technical expertise and capacity issues, (ii) unclear legal/regulatory frameworks, (iii) unclear mandates and responsibilities for statutory bodies and ministries, (iv) length of project execution, and (v) inadequate stakeholder engagements.

5.3. Policy Recommendations based on Research

5.3.1 Create a separate process for the inclusion of PPP projects into the Public Investment Program.

The government needs to have a separate process for those projects that are identified to be delivered as PPPs. The process should include a prescreening to make sure that the project can be structured as a PPP, and that it meets the value-for-money principle. Prescreening will also help address the issue of the projects getting submitted based on sketchy information. With the prescreening in hand, there needs to be subsequent high-level engagements with the private sector before the projects are included and finalised. Since the responsibility to identify projects for PPPs lies with the ministry, the prescreening and engagement can be done at the ministry level, and form part of that ministry's submission to the National Planning Commission for prioritisation.

5.3.2. Build technical expertise and capacity at both the government and private sector level.

Botswana needs to invest in training and capacity-building for key members of the PPP office, respective ministries' project officers, and all the different stakeholders that form the part of the PPP ecosystem, such as advisors, lawyers, policymakers, and potential funders on PPP matters. This is to raise awareness and ensure that stakeholders understand the integrities of PPP. Extensive benchmarking on those countries that have successfully implemented PPPs is also recommended, as it will allow the sharing of best practices between Botswana's PPP office and other relevant bodies in different jurisdictions. The private sector should also be encouraged to invest in upskilling their employees, both through on-the-job training, i.e secondment, and educational development.

5.3.3. Establish a PPP task force to review shortcomings in the legal framework, procurement policies, and mandates of statutory bodies.

The government should establish a PPP advisory task force, made up of representatives of the government and the private sector. The task force would be mandated to carry out a holistic review of Botswana's laws, inefficient procurement policies causing lengthy procurement

processes, and mandates and responsibilities for ministries and other statutory bodies to ensure that they are clear and understandable and, most importantly, fully supportive of PPPs.

5.3.4. Stakeholder engagement framework

PPPs are a public procurement method; as such, it's important to engage with the public right from project conceptualisation to post-delivery of the infrastructure. This is to ensure transparency and adequate buy-in from the public, political and social leaders, and other stakeholders that form part of the PPP ecosystem. The engagement model should allow for two-way communication, so that the stakeholders also have an opportunity to share their opinions and ideas with the government or the PPP Unit. Though the responsibility to manage PPPs is the responsibility of individual ministries, it is important for stakeholder engagements to be centralised. It is the recommendation of this study that the PPP Unit, given its coordination role, should also be the custodian of this engagement framework and should use both traditional and new forms of media to announce proposed projects and any other development that needs to be communicated to all stakeholders.

5.4 Recommendations for future research

Recommendations for future studies are as follows:

1. A key challenge identified in the study was the shortcomings in the legal framework and policies of the country. As such, a dedicated study that investigates the role of laws (clear policies and regulations) in the successful financing of PPP is recommended. This study should aim to identify gaps in existing laws and policies, as well as those that are overlapping and therefore making PPP financing and implementation difficult in Botswana.
2. In the last decade, innovative funding structures aimed at addressing the infrastructure funding gap came to the fore, such as infrastructure funds. According to the existing literature, these specialised vehicles can accelerate the implementation of PPP projects, as they promote good governance, provide ways of streamlining the procurement process, and, most importantly, are commercially run, which helps to attract private capital. Similar studies, using Botswana as a case study, should be undertaken.
3. Finally, there should be further study around the Public Investment Program and how it can be enhanced so that it is suitable for PPPs.

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APPENDICES

Appendix 1: The interview guide used for the data collection

**Master of Commerce in Development Finance
INTERVIEW/SURVEY CONSENT FORM**

Participant name:

I volunteer to participate in a research project conducted by Therisanyo Masuga as partial fulfillment of the requirements for the **Master of Commerce in Development Finance Degree** at the UCT Graduate School of Business. I understand that the research is designed to gather information about private sector challenges in financing PPPs in Botswana

This voluntary questionnaire is part of my dissertation aimed at exploring private sector challenges in financing PPPs in Botswana and will be submitted in partial fulfilment of the requirements for the degree of Master of Commerce in Development Finance. The interview contains 13 questions, and we estimate it will take an average of 20 minutes to complete. Your completion of this survey is voluntary. You are free to not answer any questions, stop participating at any time, or request not to be recorded. The interview responses collected will be kept confidential by the researcher. Thank you in advance for your help.

Objective(s) of the research

The research objectives are as follows

- To examine if the Public Investment Program is well suited for PPP
- To identify factors that affect private sector participation in the delivery of infrastructure in Botswana

Ethics approval

The ethical clearance for this study was approved by the UCT GSB Research and Ethics Committee on [the 7th of September 2022](#)

Participation and confidentiality

I understand that my participation in this research is voluntary, that I will not be compensated and that I may withdraw at any time. The interview will take approximately 20 minutes to complete and will be audio recorded

I understand that I will not be identified by name in any reports using information obtained from this interview and that my confidentiality as a participant in this study will remain secure. Subsequent uses of records and data will be subject to standard data use policies which protect the anonymity of individuals and institutions.

Should you have any questions or concerns please contact me ([00267 75 478 225](tel:0026775478225)) or my supervisor (latif.ahassan@uct.ac.za)

Consent

I consent to participate in this interview, based on the terms outlined above and subject to the following additional condition of my own (if any).

Signed by interviewee

Date

.....
Signed by Student

.....
Date

General Experience with PPP

1. What's your educational background
2. How many years of experience do you have?
3. Which sector do you have experience with? i.e. public sector/private sector or both
4. What does your current role entail?
5. Have you ever been involved/appraised/reviewed/structured/financed any PPP project?

Background on Public Private Partnerships

6. In your own definition what can be considered a Public-Private Partnerships?
7. Which projects do you think should be delivered using Public-Private Partnerships?

Challenges with PPPs in Botswana

8. What would you say are the most profound problems with PPP projects in Botswana?
9. In your view, is the Government approach to developing projects for inclusion in the Public Investment Program/National Development Plan and public procurement process suited for PPP projects?
10. What do you think are some of the challenges faced by the private sector in financing PPPs in Botswana?
11. What do you think would be required to increase the participation of the private sector in Botswana PPPs?

Closing Remarks

12. Any experience with PPP projects that you would like to share