Challenges, drivers and incentives to private sector participation in public private partnership projects in developing countries: Evidence from Zambia

Abstract

Purpose

Governments in developing countries seeking to meet their infrastructure backlog are increasingly turning to public-private partnerships (PPP) due to a lack of public funds. However, while there are factors which drive the current uptake of projects, there are challenges with attracting private finance and it is not clear what incentives can be used to attract more private participation, especially in sub-Sahara Africa (SSA). Therefore, this study examined challenges, drivers, and incentives that affect private participation in PPP projects in Zambia.

Design/methods/approach

The study used a qualitative approach with semi-structured interviews with participants who had first-hand experience working on the administration of PPP projects. The participants were predominantly from the public sector and so the results are largely a public sector perspective on the matter.

Findings

The findings show that bureaucracy and a poor business environment emanating from poor policies, long procedures and a poor economic environment are the main challenges affecting PPP projects. The current demand for the projects is being driven by a stable business and economic environment while incentives include enhancing the business environment by improving procedures and policies.

Originality/value

The study contributes to extant literature by proposing an overarching theory about the challenges affecting the implementation of PPP projects in Zambia in particular and in SSA in general. The results show areas where governments and government agencies responsible for PPP projects can focus attention to promote private participation.

Keywords: PPP challenges, PPP constraints, PPP drivers, PPP incentives, PPP private participation.

Introduction

In sub-Saharan Africa (SSA), most governments are unable to keep up with the financial load necessary for the provision of public infrastructure due to inadequate financial resources (De Mello and Sutherland, 2014; Fay, Martimort and Straub, 2021). Infrastructure is required to ensure economic growth (Akintoye, 2009) and improve the livelihoods of millions of people living in poverty in SSA. Governments are therefore looking to sustainable private finance models that can help finance public infrastructure and relieve the financial load from public coffers (Kavishe, 2018). To this end, Public-Private Partnerships (PPPs) have been found to be viable in meeting infrastructure needs (Morea and Balzarini, 2018; Akinkugbe, 2013; Osei – Kyei and Chan, 2016; Fjellstrom and Frick, 2021).

However, PPPs have several challenges that hinder their effectiveness in delivering public infrastructure in developing countries (Muleya *et al.*, 2020; Owusu-Manu *et al.*, 2020). While there are many challenges, hardly any studies have assessed factors that specifically hinder private participation. Extant literature on the subject in SSA has focused on challenges to PPP projects generally (Kang *et al.*, 2018; Evdorides and Shoji, 2013), capacity building challenges (Chileshe *et al.*, 2021), challenges of energy projects (Owusu-Manu *et al.*, 2020), and challenges of access to local finance (Bolomope *et al.*, 2021) among others. Some studies have looked at aspects of hindrances to private participation in PPP projects (cf. Muleya *et al.*, 2020; Ojelabi *et al.*, 2020).

In Zambia, PPP projects have suffered several challenges which have led to the failure of some PPP projects. For example, the PPP concession for the Kasumbalesa one-stop border post between Zambia and Congo was cancelled in 2012 (Mweemba, 2015). The concession was handed back to the concessionaire in 2015 after being renegotiated to about half of the original concession period after the concessionaire appealed to an international court. Zambia railways concession, which started in 2003, was also cancelled in 2012. The few available studies on PPP projects in Zambia have shown that there are issues with legislation and policies, transparency and accountability, bureaucracy, capacity, and market risks (Muleya *et al.*, 2020; Ojelabi *et al.*, 2020). Notwithstanding these studies, because of the dearth of research on the matter, it is unclear what specific challenges impact PPP projects, the drivers which attract the current private participation nor incentives which could be used to promote more private participation in Zambia. Therefore, more research is required on the subject because studies have shown that the level of private participation in developing countries and especially in SSA is low (Dithembe *et al.,* 2019).

Subsequently, the current study examined challenges, drivers and incentives for private participation in PPP projects in Zambia using a qualitative study to bridge the literature and methodological gaps and recommend solutions to the issues. A qualitative study was favoured because it is likely to yield results not influenced by existing prescribed lists. The study adds to the existing body of knowledge by proposing overarching theories about the challenges, drivers and incentives affecting private participation in PPP projects in Zambia and suggests consolidated focal points for government interventions to promote private participation. The results have implications for other developing countries with a similar contextual background to Zambia especially in SSA.

Literature review

A PPP is a long term agreement between a government agency and a private entity in which the private entity delivers and funds public services or assets and shares in the associated risks (Owusu-Manu *et al.*, 2020). It is typically an arrangement where private capital is used to finance projects or services traditionally provided by government agencies (Owusu-Manu *et al.,* 2020; Patel *et al.,* 2020). The theoretical underpinning of PPP projects is project finance engineering which is based on lending against the cash flow generated by the project. It requires a detailed evaluation of the project financing costs and revenue risks and their allocation among the project stakeholders. This creates a complex environment that requires balancing the risks among the project stakeholders with consequential challenges, opportunities and threats. A literature review was conducted to establish the challenges, drivers, and incentives which have been reported to influence PPP projects. Google scholar was used to find the literature using keywords with "challenges", "drivers", "incentives", and "PPP" and their various variants with no restrictions on the publication dates but with a bias towards more recent publications.

Challenges to private participation in PPP projects

Many challenges impede the participation of the private sector in PPP projects in developing countries (cf. Chileshe *et al.*, 2021; Yurdakul *et al.*, 2021). The individual challenges highlighted in extant literature are vast and so a thematic review of the literature was preferred to group the challenges into meaningful themes. To achieve this content and thematic analyses were performed to summarise the literature. The review followed the recommended linear process of qualitative data analysis of coding to identify the key theme to which particular items fall in order to achieve thematic categorisation (Costa *et al.,* 2016; Williams and Moser, 2019). Table 1 shows the resulting themes.

Table 1. Summary of challenges in PPP projects

The majority of the studies (7/12=58.33%) were quantitative in nature while the remaining papers were a government report, mixed-methods studies (2/12=16.67%) and qualitative studies (2/12=16.67%). The distribution of the methods employed in the studies is consistent with findings that quantitative studies dominate research publications and so mixed-methods and qualitative studies are required to fill this methodological gap.

The review shows that challenges that hinder the participation of the private sector in PPP projects fall into five broad themes namely, legislation and policies, transparency and accountability, bureaucracy, capacity, and market risks. Inappropriate legislation and policies impede the implementation of PPP projects and discourage widespread private participation (Bolomope *et al.*, 2021; Muleya *et al.*, 2020; Owusu-Manu *et al.*, 2020). For example, Bolomope *et al.* (2021) found that inconsistent government policies was one of the six main challenges affecting access to local finance for PPPs. It is not uncommon for successive governments in developing countries to either amend or reverse policies without regard to the private party. Policy reversals make private entities cautious of PPPs especially that the duration of PPPs is usually longer than the political office of decision makers (Bolomope *et al.*, 2021).

Lack of transparency and accountability right from the bidding process through to the concession period also hinder PPP projects (Evdorides and Shoji, 2013; Muleya *et al.*, 2020). Transparency and accountability provide assurance to private entities because their absence hints at possible corruption especially that developing countries are notorious for it (cf. Muleya *et al.*, 2020). Therefore, when transparency and accountability are missing, legitimate private entities are likely to desist from participating.

The bureaucratic nature of the PPP process is also a significant barrier to private participation (Muleya *et al.*, 2020; Musokotwane *et al.*, 2016). Lengthy processes have been reported to hinder PPPs (Evdorides and Shoji, 2013; Rezouki and Hassan, 2019). It is not uncommon for pre-contract processes to take up to four years to conclude. This inevitably leads to fatigue on the part of private entities who are likely to commit their efforts and financial resources elsewhere. The lengthy processes are exacerbated by the lack of government structures for effective decision-making, administrative procedures, and guidelines (Ojelabi *et al.*, 2020).

The review also showed that often, both the private and public sectors lack sufficient capacity to implement projects (Evdorides and Shoji, 2013; Ojelabi *et al.*, 2020). This inability is often due to a lack of relevant specialisations (Muleya *et al.*, 2020) and a lack of financial capacity (Kang *et al.*, 2018; Tamošaitienė *et al.*, 2020) among other challenges as highlighted in Table 1.

Market risks also emerged as a significant barrier to private participation. Prominent market risks included exchange and interest rate fluctuations (Gurara *et al.*, 2018; Ojelabi *et al.,* 2020) low demand (Chileshe *et al.*, 2021) lack of guarantees, and corruption (Rezouki and Hassan, 2019). Market risks deter private participation because private entities seek business opportunities and when market risks threaten the opportunities, their propensity to participate recedes.

Drivers of private participation in PPP projects

The results of the content and thematic analysis for the drivers of PPP projects shown in Table 2 show that the drivers cluster into three main groups namely, business environment, economic environment, and capacity. A conducive business environment contributes to private participation by creating an environment for private entities to exploit (Fleta-Asín and Muñoz, 2021). Gebremeskel *et al.* (2020) found that an environment with reduced costs promotes participation. Bisaro and Hinkel (2018) found that high returns on private capital equally promote participation while Evdorides and Shoji (2013) found that appropriate risk allocation is good for participation. This can be attributed to the fact that private entities are always willing to exploit a situation rife with business opportunities.

Stable and predictable national economic, and institutional environments also drive private participation (Cui *et al.*, 2019; Fleta-Asín and Muñoz, 2021). Cui *et al.* (2019) showed that a stable macroeconomic condition is conducive to private participation while Fleta-Asín and Muñoz (2021) demonstrated that institutional environments are also important for fostering participation. This is because predictable environments and institutions make it easy for private entities to plan and predict their business activities.

A strong capacity for the public sector to drive the PPP process also promotes private participation (Gebremeskel *et al.*, 2020; Fleta-Asín and Muñoz, 2021; Evdorides and Shoji, 2013). Public capacity assures the private entity that procedures and processes will run smoothly and according to plan. This assures them that the procedures and processes can be relied upon. Public capacity may manifest through the management ability of the public sector (Gebremeskel *et al.*, 2020), institutional environments (Fleta-Asín and Muñoz, 2021), and effective communication and negotiations between the public and private parties (Evdorides and Shoji, 2013).

Table 2. Summary of drivers of PPP projects

Incentives to promote private participation in PPP projects

A review of incentives that can be used to promote private participation in PPP projects was done using the same content and thematic analysis process as for the barriers and drivers. The results in Table 3 show that the incentives cluster into two main categories of direct incentives, and business environment. Direct incentives include financial incentives such as lowering associated costs, risks, and meeting budget deficits (Ilgenstein, 2022). Others are direct government incentives (Rezouki and Hassan, 2019), viability gap funding (IRENA, 2020), and concession loans and tax incentives (Bisaro and Hinkel, 2018).

Incentives can also be in the form of appropriate risk allocation (Evdorides and Shoji, 2013), competitive bidding (Wang *et al.*, 2018), and an enabling business environment (Rezouki and Hassan, 2019). A fair allocation of risk, competitive bidding, and an enabling business environment ensure that the private entity can work optimally and make its profits. Therefore, these incentivise participation in PPP projects.

Table 3. Summary of incentives to promote private participation in PPP projects

Study Context – Zambia: A developing country in sub-Sahara Africa

Zambia is a large landlocked country in central southern Africa that shares its borders with eight countries (Angola, Botswana, Democratic Republic of Congo, Malawi, Mozambique, Namibia, Tanzania, and Zimbabwe). It is one of the youngest countries by median age with a rapidly growing population at 2.8%. The economy is mainly driven by copper exports that account for about two-thirds of total exports and over 70% of the foreign exchange earnings (Ahadjie *et al.*, 2021). Other exports include sugar, tobacco, gemstones, cotton, and electricity and the majority of the population directly depends on agriculture. The country is therefore primary commodity dependent since the majority of the exports and economic activities are classified as primary commodities. The per capita gross domestic product (GDP) stood at $1,051 compared to a sub-Sahara Africa (SSA) average of $1,502 in 2020 with an unemployment rate of 12.17% compared to an average rate of 6.6% for the rest of the SSA. Based on its per capita GDP, Zambia is classified by the World Bank as a low-income country (Kapotwe and Tembo, 2021). Developing countries are mainly characterised by low per capita real income, high population growth rates, high rates of unemployment, dependency on primary sectors, and primary commodity export (Kapotwe and Tembo, 2021).

In the period up to 2020, Zambia had a total of about ten PPP projects in comparison to an average of 8.5 projects in the 15 countries of the Southern African Development Community (Khatleli, 2020). However, several high-profile projects experienced severe challenges with up to 75% of concession agreements cancelled after a change in political governance regime (Chilala, 2019). Prominent among them was the $25m Kasumbalesa border post where post-concession audits found that the value of the concession was just under $4m. Others include the 20-year Zambia Railways Limited concession which was cancelled; and the 25-year Mulungushi Harbour concession which was also cancelled (Chilala, 2019). The concessions were cancelled due to challenges with their implementation emanating from flawed procurement processes (Chilala, 2019; Mweemba, 2015). There are some PPP projects which have registered success. However, many PPP projects in Zambia, as the case is in other SSA countries, are fraught with many challenges which hinder private participation. Studies are required to inform future project implementation if the drawbacks from past projects are to be avoided. This is particularly important for Zambia where more PPP projects are earmarked with a $650m PPP road project underway in 2023. Therefore, this study assessed the challenges affecting private participation in PPP projects in Zambia, the factors driving the current levels of participation, and what incentives can improve the uptake in order to recommend measures that can be used to improve private participation.

Research method

Research approach and design

A qualitative research design with a survey strategy and using semi-structured interviews was used to establish the perceptions and beliefs of experts on challenges affecting PPP projects in Zambia and their associated drivers and incentives. The data analysis process was completely inductive in nature and not influenced by existing theories but focused on generating independent theory from the data (Williams and Moser, 2019). The qualitative approach was favoured because previous studies are predominantly quantitative in nature. Semi-structured interviews were preferred over structured and unstructured interviews because they allow for a deeper understanding of the opinions of the participants while at the same time being reasonably objective (Horton *et al.,* 2004). This is in contrast to the limitation of the rigidity of structured interviews and the difficulty of analysing varying questions from unstructured interviews (Horton *et al.,* 2004).

Sampling and data collection

Participants were purposively drawn from the Government PPP unit and other Government and quasi-government organisations that have ventured into PPP projects in Zambia. Specifically, the expert sampling variant of purposive sampling was used to identify individuals with a high level of knowledge of PPP projects in Zambia. It was preferred because it is the best way to identify participants with a specific target level of knowledge on a matter. Two participants were academics from two public universities and one from a mini-grid solar energy company. The organisations were identified by requesting the PPP unit for organisations that had ventured into PPP projects. The organisations were then requested to nominate the lead person for the PPP projects to participate in the study. A sample of ten participants was obtained with only one of them coming from the private sector. Therefore, the findings of the study are predominantly a public sector perspective of the challenges affecting PPP projects in Zambia and their associated incentives.

The sample size of ten participants was not predetermined but based on the number of eligible participants meeting the criteria. Participants were recruited until no more eligible participants were available. A large sample size is not a critical contributing factor to quality in qualitative studies (Braun *et al.,* 2017). Qualitative studies with a relatively small sample can still result in a broad range of core issues if the participants have the relevant experience about the phenomenon under study (Starks and Brown-Trinidad, 2007). In addition, Smith (2018) stressed that the rich knowledge of a purposefully chosen small sample presents a unique strength of qualitative studies, even though this is highlighted as a limitation in some studies. Subsequently, several qualitative studies have reported findings with samples ranging from one to ten participants (D'Young, 2008; Agyekum *et al.,* 2019; Owusu-Manu *et al.*, 2020; Rehman *et al.,* 2021; Kavishe *et al.,* 2023). Because of the low uptake of PPP projects in SSA, several qualitative studies have used samples as small as ten (cf. Owusu-Manu *et al.*, 2020; Kavishe *et al.,* 2023). In addition, notwithstanding the relatively small sample size, the interviews for this study produced recurring comments on most themes and so information redundancy was achieved which was indicative of data saturation (Saunders *et al.,* 2018). Therefore, the sample was considered acceptable especially since the participants were mostly senior members of the organisations with vast experience and rich knowledge in the field of PPP projects.

The sample demographics are shown were comprised of directors (30%), senior managers (20%), middle managers (30%), and professionals from academia (20%). The minimum level of education in the sample was a university undergraduate degree (70% undergraduate degree, 30% post-graduate degree) with experience in PPP projects ranging between three to 14 years. The sample was predominantly male (90%). PPP projects that the study participants were involved in include a shopping mall, solar mini-grids, roads, university student hostels, and a large public swimming pool. The nature of the projects undertaken through the PPP framework underscores the low level of PPPs uptake in Zambia and so the need to promote private participation and subsequently encompass bigger infrastructure projects. Recently (in March 2023), a large PPP concession to construct a 327 Km dual carriageway and rehabilitate a 45 km stretch was announced with a value of \$650m. This is indicative of an improving uptake of PPP projects in the country. Therefore, the current study has the potential to inform future PPP projects in Zambia and SSA.

All the semi-structured interviews were conducted via online virtual meeting applications. Virtual platforms were preferred because of their convenience of being conducted in the comfort of both the interviewer and interviewees' premises in view of the Covid-19 pandemic. The duration of the interviews ranged between 20 and 52 minutes with an average of 34 minutes. All the interviews were recorded, transcribed by the online software Amberscript©, verified and corrected manually and qualitatively analysed using *NVivo v12*. Participants were asked for consent to record the interviews. The interviews were framed around core questions focusing on the challenges and constraints of private participation in PPP projects, and factors that would encourage participation. The questions focused on the perceptions and experiences of the participants as recommended by Braun *et al.* (2017). The data analysis followed the recommended linear process of qualitative data analysis of open, axial, and selective coding, and theory development and construction of meaning (Williams and Moser, 2019).

Data analysis

Data analysis followed the phases suggested by Braun *et al.* (2017) whereby regularly occurring words and short phrases from transcripts were constantly compared to identify key themes and concepts for categorisation (Costa *et al.,* 2016; Williams and Moser, 2019). This was achieved by reading and re-reading the interview transcripts and comparing the initial codes and then organising similar words and phrases and interesting comments were selected and put in nodes. Axial coding refined, aligned and categorised the themes emerging from the open codes to identify distinct thematic categories so that core codes can be identified (Costa *et al.,* 2016; Williams and Moser, 2019). This was achieved by cross-referencing the open codes and categorising related ones. The axial codes in each category were refined into one selective theme and subsequently developed into theory. The resulting open codes and the proposed theory are shown in Figure 2.

Findings and discussion

The themes identified from the interviews are summarised in Figure 1. The themes highlight the challenges affecting PPP projects and the drivers, and incentives that enhance private participation in public projects. Based on the findings, it was theorised that excessive bureaucracy and a poor business environment are the main challenges affecting PPP projects in Zambia. Further, PPP projects are being driven by the existing business opportunities and the stable political and economic environment in the country.

Figure 1: Results - Open, axial and selective codes and proposed theory

Challenges in PPP projects in Zambia

The findings show that challenges affecting PPP projects in Zambia cluster into two axial codes relating to policies and procedures, and economic matters. Economic matters are related to the poor business environment because of exchange and interest rate fluctuations, unavailability of finance, and the absence of government sovereign guarantees. Based on the selective themes, it was theorised that excessive bureaucracy and a poor business environment are the main challenges to private participation. This postulation is also supported by extant literature which has shown that policies, processes, and guidelines are among the challenges affecting PPP projects in developing countries (Jooste and Scott, 2012; Osei – Kyei and Chan, 2016; Dithebe et al., 2019; Osei-Kyei and Chan, 2019; Chileshe *et al.*, 2022; Fjellstrom and Frick, 2021; Muleya *et al.*, 2020).

Policies and procedures

Challenges related to policies and procedures include long approval processes for projects, inconsistent policies, and the government failing to meet its contract obligations. These are all mainly due to excessive bureaucratic procedures by government bodies. Inconsistent policies can be seen in the several failed and cancelled concession agreements in Zambia (cf. Chilala, 2019; Mweemba, 2015). While the cancellation of the concessions may be justified, it is still testament to policy reversal which is synonymous with inconsistencies in policies. The problems associated with policies and procedures resonate with the theme of legislation and policies that was highlighted in in the literature review as being a barrier to private participation (cf. Muleya *et al.*, 2020; Ojelabi *et al.*, 2020; Owusu-Manu *et al.*, 2020).

Long approval process

Five interviewees noted that the approval process for PPP projects is very long. This was attributed to the bureaucratic procedures involving many processes. There were comments such as, *"… to sign the contract it almost took five years"* (P1); *P2 said, "… the whole process is long and tedious and unnecessary. But I know the government has been trying to streamline those processes".* The Government of the Republic of Zambia acknowledged the problem of the lengthy process of PPP approvals (Musokotwane *et al.*, 2016). The participant from the PPP unit also acknowledged this particular challenge and highlighted that the procedures and processes were being streamlined and so it is noteworthy that this challenge is being addressed.

Inconsistent policies

Three participants argued that policies are inconsistent and so deter private finance. P6 said, *"What is constraining usually is policies; they usually seem to be inconsistent and that has led to a lot of inefficiency*". P10 added, *". . . the other thing is political environment…whereby this government comes in then this project is cancelled.*" Several studies have highlighted the importance of policy in promoting private participation in public infrastructure projects (Osei – Kyei and Chan, 2016; Osei-Kyei and Chan, 2019; Osei – Kyei and Chan, 2016; Fjellstrom and Frick, 2021; Dithebe *et al.,* 2019; Muleya *et al.*, 2020; Ojelabi *et al.*, 2020; Owusu-Manu *et al.*, 2020). Bolomope *et al.* (2021) found that inconsistent government policy was among the factors that hindered access to finance for PPP projects in Nigeria. In Zambia, Muleya *et al.* (2020) also found that unclear policies were a challenge to the implementation of PPP projects. It is therefore not surprising that respondents felt that inconsistent policies were one of the major challenges that could affect private participation in PPP projects in Zambia.

Government not meeting its obligation

One interviewee cited a scenario where Government was supposed to provide some counterparty funds before the private funds could be unlocked but delayed in doing so. In this case, it was noted that the Government meeting its end of the obligation in the PPP was a challenge. This can be seen in the response by P5 that*, "…The only challenge I think we had was on the government's part raising the 15 percent; but that was overcome and the project kicked off. Then maybe there has been once or twice a slight delay for the Minister of Finance making some other obligations that they pay towards the loan repayment. But those have been a minority".* Government bureaucracies and inefficiencies are bound to materialise where the government is required to contribute economically to the execution of PPP projects.

This happens when viability gap funding is needed to make a project financially viable (IRENA, 2020). This is expected considering the inefficiencies associated with governments of most developing countries.

Economic environment

Challenges emanating from economic factors included exchange and interest rate fluctuations, unavailability or lack of access to finance, and lack of sovereign guarantees for project finance. These factors create a poor business environment that presents a challenge to private participation in PPP projects. Barriers due to the economic environment are similar to those in the literature review under the theme of market risks (Ojelabi *et al.*, 2020; Rezouki and Hassan, 2019).

Exchange and interest rate fluctuation

Six interviewees pointed out that the prevailing economic climate in terms of exchange and interest rates was discouraging private participation in PPP projects. P1 said, "*I think for now, the interest rates are very high. So most of them may have challenges because, you see, most of the financial markets with money are outside the country. So people have to borrow in foreign currency* . . ." P5 added ". . . *it's mainly the cost of borrowing that's what most of them complain [about]*." The findings show that both the currency exchange rate and the local interest rate on borrowing influence the participation of the private sector in PPP projects. Exchange and interest rate fluctuations are important because private finance in PPP projects in developing countries is usually from international actors (Gurara *et al.*, 2018). Therefore, changes in economic fundamentals tend to create fluctuations in the currency exchange rate and often to the detriment of international investors (Ojelabi *et al.*, 2020).

Unavailability of finance

The unavailability of finance was found to be a challenge for the PPP projects. This can be seen in comments like, ". . . *the main challenge was where we were going to get the bulk of the funding*" (P6). Rezouki and Hassan (2019) also found that a lack of private funds was a barrier to private participation. The economic situation of developing countries means that finance is not always readily available locally. In Zambia, because of the poor economy, interest rates from local financial institutions are very high (Mubanga, 2019). This is consistent with findings by Brown-Luthango (2011) that South Africa faces the challenge of eradicating infrastructure backlogs, maintaining existing infrastructure, and providing new infrastructure because of challenges in finding alternative funding mechanisms, especially at the local government level.

Absence of government sovereign guarantee

One interviewee noted an instance where funding agencies asked for a sovereign guarantee if they were to provide funds to a private entity. However, it seems at the time of writing, the government was reluctant to issue sovereign guarantees for private debt. P1 said *". . . the major constraint is that government is not willing to guarantee. Because these people in the private sector, they always want someone to guarantee that development … in case the project fails, Government should be able to pay."* Studies have shown that country and sovereign risk usually deter private investors from participating in PPP projects in developing countries (Jett, 2018; Rezouki and Hassan, 2019). It is therefore understandable that funding agencies would ask for sovereign guarantees to provide financing to developing countries. In most cases, this would put private entities in a win-win position at the expense of the public. It is therefore understandable that governments would be reluctant to issue sovereign guarantees for private debt because they have several other implications (cf. IRENA, 2020). Ryan (2011) highlighted that loan guarantees pose a significant potential risk and cost to taxpayers. This then creates a dilemma in that, while private entities may be willing to participate in PPPs, funders require sovereign guarantees and governments in developing countries are unwilling to provide this guarantee for non-sovereign debt (Musokotwane *et al.*, 2016) because of the significant risks associated with them (Ryan, 2011; IRENA, 2020).

Drivers for private participation

The study found that drivers for private participation cluster into two axial themes related to the business opportunity, and a stable environment. Business opportunities are driven by the available demand for public goods and the subsequent profits while the current stable political environment and policies provide stability which promotes private participation. Subsequently and based on the selective codes, it is theorised that business opportunity and a stable political and economic environment drive private participation in PPP projects. The theory is supported by studies which found that project profitability and a conducive business environment were some of the main attractions for private participation in PPP projects (Morea and Balzarini, 2018; Dithebe *et al.,* 2019; Bisaro and Hinkel, 2018; Evdorides and Shoji, 2013; Fleta-Asín and Muñoz, 2021; Cui *et al.*, 2019).

Business Opportunity

Current drivers for PPP projects are demand for the public goods and the subsequent profits that can be realised. These are drivers because they create an opportunity for business in the private sector. The theme of business opportunity driving private participation is very similar to the theme in Table 2 from the literature review.

Demand and profit

Demand and profit was the most common factor driving private participation in PPP projects and was mentioned by seven interviewees. This was supported by comments such as, ". . . *for a businessman, it's about profit really." "Nobody should cheat you that they like you; they do it for themselves. It's all about money and making more money"* (P2). This is because where there is demand there is likely to be profit and profit is the *raison d'etre* for the existence of private business entities. This is consistent with findings by Morea and Balzarini (2018) who found that PPP projects in agriculture were profitable and so motivated private participation. Bisaro and Hinkel (2018) equally found that high returns from projects encouraged private participation.

Economic environment

A stable business and political environment also drive private participation in PPP projects. This is because the stability reduces the risks that the private entities need to contend with and they can more accurately predict their business and financial positions throughout the duration of the concession. Factors that affect the business environment also include government policies. A conducive economic environment was also identified in the literature as a major factor that drives private participation.

Environment and Policies

Four interviewees highlighted the importance of a conducive business environment with comments such as, "*I think the business environment and policies are there for people to participate in business and also in the development of infrastructure*" (P1). P4 added, "*Zambia has had this stable environment politically; so people find it easy to invest unlike investing in a place where you are not certain whether your investment will be there tomorrow or not*". Dithebe *et al.* (2019) highlighted the importance of a conducive business environment and that it can be created through political will and commitment and the enhancement of policy and legislation. Cui *et al.* (2019) and Fleta-Asín and Muñoz (2021) equally found that a stable macro-economy was a key driver for projects. The results suggest that the business environment in Zambia is conducive to PPP projects and can be attributed to the stable political climate which the country has enjoyed for a very long time now (Sambo *et al.,* 2021).

Incentives to encourage private participation

Incentives that would encourage private entities to participate in PPP projects clustered into two axial codes relating to the business environment, and policies. It was found that the business environment could be enhanced by giving access to affordable loans, providing access to funding, and providing sovereign guarantees while policies could be streamlined and information made more easily and readily available to private entities. Based on the selective themes, it was theorised that an enhanced business environment promotes private participation in PPP projects. This theory is supported by studies which found that access to financial markets, and governments creating a conducive environment for business were critical success factors for PPPs (Jackson and Hlahla, 1999; Chileshe *et al.,* 2022). A conducive business environment could also be created by creating a system for providing sovereign guarantees with appropriate checks and balances in tandem with the findings by Bhatia (2019). Streamlining business procedures is another way of enhancing the business environment (Chileshe *et al.,* 2022; Dithebe *et al.,* 2019; Jooste and Scott, 2012; Evdorides and Shoji, 2013; Rezouki and Hassan, 2019; Wang *et al.*, 2018).

Enhancing business environment

Incentives required to encourage private participation in PPP projects include providing access to affordable loans and providing sovereign guarantees. These incentives point to the need to enhance the business environment to promote private participation. A conducive business environment also emerged from the literature as a broad theme of incentives to promote private participation.

Affordable loans and access to funding

Access to affordable finance was cited as an incentive that could promote the participation of private entities in PPP projects. This was supported by comments like, ". . . *incentives through loans that are affordable because the interest rates on some of these loans . . . are so high."* (P*6).* P9 said, "*Incentives could be in form of grants or subsidies so as to reduce the cost of doing business.*" Access to affordable finance plays a critical role in encouraging private participation in sustainable infrastructure provision. This is because private entities bring their know-how, efficiency, and access to capital markets while the government normally provides the market for what was otherwise a public good (Jackson and Hlahla, 1999; Chileshe *et al.,* 2022). Chileshe *et al.* (2022) found that access to a financial market (among other factors) was a highly ranked critical success factor for PPP projects.

Availability of sovereign guarantee

One interviewee commented that sovereign guarantees could help drive the participation of private entities in PPP projects. P6 said, "*We need government to come on board to help us with the guarantees.*" P1 added, "*… the area where most of the people who want to participate or most of the companies wanting to participate, want to get that surety from government and government rarely gives them the surety*". The dilemma of sovereign guarantees has been alluded to which is that private funders would like sovereign guarantees for debt in developing countries while governments are unwilling to provide the guarantees because of the significant potential risk and cost to taxpayers (Jett, 2018; IRENA, 2020). In a situation where sovereign guarantees are not possible, governments could consider issuing letters of comfort or support, using preferred creditor status of multilateral banks and insurers, or using Put and Call option agreements (IRENA, 2020). This is supported by findings by Bhatia (2019) that governments with checks and balances on the issuance of guarantees and other forms of indirect support for PPP projects attract higher levels of private participation.

Policies

Policies can also be used to enhance private participation in PPP projects. Specifically, streamlining existing policies and procedures could alleviate one of the major problem which relates to excessive bureaucracy. Good policies also emerged from the literature as incentives for promoting PPPs with issues such as appropriate risk allocation (Evdorides and Shoji, 2013) and a competitive bidding process (Wang *et al.*, 2018).

Streamline Procedures and make information easily accessible

It was noted that there is a need to streamline the procedures for having a PPP project approved to incentivise and attract private participation. The interviewees suggested that even though the procedures are important, they should be streamlined and made simpler. There were comments like, "*. . . we need to have a streamlined way of doing these approvals. It shouldn't be something that takes three to four years; if that can be worked on, it would improve efficiency; it can encourage the private sector to participate.*" (P4). Several studies have hinted at the importance of having a well-organised, committed and transparent agency driving PPP projects to ensure success (Chileshe *et al.,* 2022; Dithebe *et al.,* 2019; Jooste and Scott, 2012). While there is only one primary agency responsible for coordinating PPP projects in Zambia, several other approvals need to be obtained from other agencies before final approval to proceed with a PPP project is given.

One interviewee pointed out that having readily available information could promote private participation in PPP projects because it has been found that private investors often do not have access to relevant information. The absence of readily available information on PPPs in Zambia was also highlighted as a challenge in the development of PPPs by a committee of Members of Parliament looking at economic affairs (Musokotwane *et al.*, 2016). Providing readily available and accessible information could be essential in directing private entities into areas which are economically viable and so encourage their participation.

Conclusions

The study examined challenges, drivers, and incentives for private participation in PPP projects in Zambia. It is theorised that excessive bureaucracy, and a poor business environment are the main challenges and that an enhanced business environment could promote private participation. Therefore, governments should streamline their PPP processes and provide an enabling business environment. Streamlining the processes can be achieved by identifying and removing redundant activities. An enabling environment can be achieved through enhancing private access to finance by providing sovereign guarantees, letters of comfort or Put and Call Option Agreements to provide some assurance to funding agencies about the security of their investments because economic risks were found to impede private participation. This would have to be on selected projects to avoid the risks associated with sovereign guarantees.

The findings also show that business opportunity, and a stable economic and political environment help to drive private participation. Additionally, an enhanced business environment works as an incentive to promote participation. Therefore, governments should implement policies that create an enabling business environment for the private sector. Policies can be used to enhance the business environment for the private sector and ensure business opportunities are available for them to exploit. Governments could enact policies that aim to mobilise private finance that contributes to economic growth and sustainable development such as tax concessions, interest rate reduction, and abolition of monopoly privileges among others.

The study contributes to the extant literature by proposing overarching theories about the main issues affecting private participation in PPP projects. The proposed theories offer fresh insight into private participation in PPP projects in Zambia in particular and in developing countries in the SSA region generally. The proposed theories also suggest consolidated focal points for government interventions aimed at promoting private participation in PPP projects. The findings also have implications for government agencies responsible for PPP projects because they highlight areas where the agencies can focus attention in order to promote private participation. The responsible agencies can work towards improving their procedures to make them less bureaucratic. Government could also adjust their policies to reduce risks for private entities in order to create a more favourable business environment. The study is also significant because it is one of very few that have proposed overarching theories about issues affecting private participation in PPP projects. Additionally, the majority of previous studies are predominantly quantitative in nature and have suggested a myriad of issues affecting PPPs and also created a methodological gap. This is evidenced by there being hardly any studies proposing theories arising from inductive designs. Therefore, the study also contributes to the literature by bridging the methodological gap and bringing a qualitative inductive perspective on issues affecting private participation in PPP projects to counterbalance the predominant quantitative studies.

However, the study has several notable limitations. Firstly, the interview data was collected from a sample that was predominantly from the public sector. Therefore, the results are predominantly a public sector perspective of issues affecting private participation in PPP projects. Secondly, the small number of interviewees means that the findings lack external validity and so lack generalisability. Notwithstanding, and even if they are highlighted as limitations, purposefully chosen small samples produce rich knowledge which is a unique strength of qualitative research even with small samples (Smith, 2018). Further, because the study used an exploratory qualitative design, it only proposed theory and did not test the postulated hypotheses. Future studies could test the proposed hypotheses.

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Table 1. Summary of challenges in PPP projects

Theme	Codes from literature	Reference	Research approach	Country
Legislation and policies	Deficiencies in PPP framework and legislation	(Muleya *et al.*, 2020)	Mixed methods	Zambia
	High risk for private entity	(Evdorides and Shoji, 2013)	Quantitative	Zambia
	Lack of political will	(Chileshe *et al.*, 2021)	Quantitative	Tanzania
	Political and legislative challenges	(Kang *et al.*, 2018)	Qualitative	Developing countries
	Political and legislative challenges	(Tamošaitienė *et al.*, 2020)	Quantitative	Middle east
	Lack of legal framework	(Rezouki and Hassan, 2019)	Quantitative	Iraq
	Political constraints; ineffective PPP policy	(Ojelabi *et al.*, 2020)	Quantitative	Nigeria
	Lack of PPP policy and poor laws	(Owusu-Manu *et al.*, 2020)	Qualitative	Ghana
	Inconsistent government policies	(Bolomope *et al.*, 2021)	Qualitative	Nigeria
Transparency and accountability	System lack of transparency and accountability	(Muleya *et al.*, 2020)	Mixed methods	Zambia
	Low transparency of procurement	(Evdorides and Shoji, 2013)	Quantitative	Zambia
Bureaucracy	Obstructed by bureaucracy	(Muleya *et al.*, 2020)	Mixed methods	Zambia
	Lack of coordination and political issues	(Evdorides and Shoji, 2013)	Quantitative	Zambia
	Insufficient public administration processes; delay in acquisition of land	(Rezouki and Hassan, 2019)	Quantitative	Iraq
	Lack of government structure for effective decision making; administrative procedures and guidelines; poor coordination among public sector departments	(Ojelabi *et al.*, 2020)	Quantitative	Nigeria
	Lengthy PPP process	(Musokotwane *et al.*, 2016)	Government report	Zambia
Capacity	Lack of relevant specialisation to negotiate with private sector; lack of skill knowledge and awareness	(Muleya *et al.*, 2020)	Mixed methods	Zambia
	Insufficient audits; lack of both public and private sector capacity	(Evdorides and Shoji, 2013)	Quantitative	Zambia
	Lack of hands on training; inadequate qualifications; limited local people with experience; lack of resources; lack of successful PPP projects; lack of PPP trainers; high cost in conducting PPP training	(Chileshe *et al.*, 2021)	Quantitative	Tanzania
	Weak planning institutions	(Babatunde *et al.,* 2017)	Quantitative	Nigeria
	Insufficient capacity (economic and financial)	(Kang *et al.*, 2018)	Qualitative	Developing countries
	Insufficient capacity (economic financial technical and organisational)	(Tamošaitienė *et al.*, 2020)	Quantitative	Middle east
	Public sector poor capacity	(Ojelabi *et al.*, 2020)	Quantitative	Nigeria
	Poor capacity due to economic instability	(Owusu-Manu *et al.*, 2020)	Qualitative	Ghana
Market risks	Risk sharing	(Muleya *et al.*, 2020)	Mixed methods	Zambia
	Low demand	(Chileshe *et al.*, 2021)	Quantitative	Tanzania
	Corruption; lack of private funds; lack of guarantees	(Rezouki and Hassan, 2019)	Quantitative	Iraq
	Exchange risks	(Ojelabi *et al.*, 2020)	Quantitative	Nigeria
	Exchange and interest rate fluctuations	(Gurara *et al.*, 2018)	Quantitative	Developing countries
	Macro fundamentals and micro and market microstructures	(Geda *et al.*, 2018)	Mixed methods	Zambia

Table 2. Summary of drivers of PPP projects

Theme	Codes from literature	Reference	Research approach	Country
Business environment	Cost reduction	(Gebremeskel *et al.*, 2020)	Quantitative	Ethiopia
	High returns	(Bisaro and Hinkel, 2018)	Literature review	Global

	More residual rights controlled by private investors; competitive bidding	(Wang *et al.*, 2018)	Quantitative	China
	Appropriate risk allocation	(Evdorides and Shoji, 2013)	Quantitative	Zambia
	Economic environment	(Fleta-Asín and Muñoz, 2021)	Quantitative	Developing countries
	Conducive business environment	(Dithembe *et al.,* 2019)	Quantitative	South Africa
	A stable political climate	(Sambo *et al.,* 2021)	Government report	Zambia
Economic environment	A stable macroeconomic condition	(Cui *et al.*, 2019)	Quantitative	China
	Institutional and economic environment	(Fleta-Asín and Muñoz, 2021)	Quantitative	Developing countries
Capacity	Management ability of public sector and ability of private sector	(Gebremeskel *et al.*, 2020)	Quantitative	Ethiopia
	Institutional environments	(Fleta-Asín and Muñoz, 2021)	Quantitative	Developing countries
	Effective negotiations between public and private parties	(Evdorides and Shoji, 2013)	Quantitative	Zambia

Table 3. Summary of incentives to promote private participation in PPP projects

Theme	Codes from literature	Reference	Research approach	Country
Direct incentives	Financial incentives (lower associated costs, risks and budget deficit, higher efficiency, effectiveness and equity, no public sector borrowing)	(Ilgenstein, 2022)	Qualitative	Switzerland
	Transparent process and contract, incentives and monitoring, screening and technical assistance, unbundling and benchmarking, funding and small liabilities, information clarification and signaling, risk and contract management and cooperation and finance factors	(Owusu-Manu *et al.*, 2021)	Quantitative	Ghana
	Explicit and implicit reputation incentives	(Li *et al.*, 2020)	Quantitative modelling	Global
	Variable availability payments, minimum revenue guarantees, variable term contracts	(Rouhani *et al.*, 2018)	Literature review	Global
	Concession loans; tax incentives	(Bisaro and Hinkel, 2018)	Literature review	Global
	Government incentives to support projects	(Rezouki and Hassan, 2019)	Quantitative	Iraq
	Viability gap funding	(IRENA, 2020)		
Business environment	Appropriate risk allocation	(Evdorides and Shoji, 2013)	Quantitative	Zambia
	Competitive bidding process	(Wang *et al.*, 2018)	Quantitative	China
	Solid enabling environment	(Rezouki and Hassan, 2019)	Quantitative	Iraq

Figure 1: Results - Open, axial and selective codes and proposed theory