PUBLIC PRIVATE PARTNERSHIPS: A POSSIBLE ALTERNATIVE FOR DELIVERY OF INFRASTRUCTURE PROJECTS IN AFRICA

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ABSTRACT

It is estimated that Africa needs $93 billion annually until 2020 in order to bridge its infrastructure deficit. It is through significant investment in infrastructure development that economic growth and poverty alleviation can be enhanced. However central to all construction projects is an effective and sustainable procurement system. There is a notable shift by some African governments to turn to the private sector to design, build, finance and operate infrastructure facilities previously provided by the public sector in the form of Public Private Partnerships (PPP's). As an innovative financing model, PPPs present an opportunity to governments to improve service delivery. Accordingly, this paper focuses on assessing international best practices as to how some developing nations tap into the resources of the private sector in implementing their infrastructure projects. The study is a result of critical review, synthesis and contextualization of relevant academic literature, conference and journal publications. A thorough document review method was employed to assess how some developing countries have institutionalized PPP as part of their development strategy. The paper will be of significant value to senior government officials as understanding the concept and dynamics of PPP will result in accelerated and effective service delivery.

KEYWORDS: Infrastructure development, Innovative financing model, Public private partnerships, Risk allocation, Value for money.

INTRODUCTION

The purpose of this paper is to assess international best practices on how some developing nations tap into the resources of the private sector in implementing their infrastructure projects. The paper reviews recent trends on Public Private Partnerships (PPPs) as a financing and procurement vehicle mainly in the construction projects on the African continent. The study employed exploratory study using document review method of the protocol designed for the author's dissertation study. The organization of the study is compiled into five parts. The first part discusses the link between infrastructure development and economic growth as well as the status of infrastructure development in Africa, the second one focuses on PPPs as an innovative finance model, the third one outlines the research methodology employed by the study, the fourth part presents the findings of the study. Finally a conclusion summarizes key lessons from the experiences of developing countries that have implemented PPP as an attractive alternative for procuring public service infrastructure.

The Link between Infrastructure Development and Economic Growth

The basic gap in African infrastructure development is a severe handicap to growth and poverty alleviation. Investment in infrastructure boosts private sector activities by lowering the cost of production and opening new markets and thereby presents new production and trade prospects. It is therefore critical that Africa invests in infrastructure development (Bwanali, 2015). The African Union Commission and NEPAD Agency (2011) argue that the link between the economy and infrastructure is critical as a stimulant to inclusive growth and sustainable development. In fact the high cost of energy, transport, and internet access is a major economic growth deflator and is partly linked with Africa's sustained economic marginalization. This has forced African governments to upscale infrastructure development in order to become more competitive in the global marketplace. Infrastructure development thus contributes to growth and development through several channels including decreasing trade transaction costs, increasing the durability of capital goods, fostering higher trade and investment, escalating demand and supply divergence and achieving economies of scale and scope (United Nations Conference on Trade and Development, 2013).

Bhattacharya, Romani and Stern (2012) concur that many emerging economies and most low income countries require a significant injection in infrastructure investment to ease growth limitations, respond to urbanization pressures and meet their critical goals for development, inclusive growth, and sustainability. Strategic infrastructure, in the form of energy, roads and ports needs to be built to spur economic growth. Africa needs huge financial investments to narrow the region's infrastructure gap and set itself on par with the rest of the developing world. Thus African countries must therefore undertake infrastructure sector reforms and innovation to generate more resources for the sector, because the traditional sources of finance will not be sufficient (Ondiege, Moyo & Chouchane, 2013).

The fast pace of urbanization requires a greater sustainable infrastructure need than ever before. It is projected that between 2010 and 2030 the global population will increase by almost 2 billion (from 6.1 to 8.1 billion). Most of this growth is expected to be in the developing world in urban settlements that are under-developed. Responding to these urbanization pressures requires a massive injection in infrastructure investment (Bhattacharya *et al*., 2012). This view is shared by Ernst and Young (2011) who state that by 2050, the world's population is expected to have grown by 2.3 billion people, ultimately reaching 9.1 billion. There is therefore a need for impactful and sustainable investment in infrastructure that supports the growing African population (Bwanali, 2015).

The Status of Infrastructure Development in Africa

Africa has enormous infrastructure shortage and it lags behind other developing regions, particularly in the areas of energy and transportation but also in Information and Communications Technology (ICTs). In fact only 30% of Africa's population is estimated to have access to electricity, compared to almost 70% to 90% in other developed regions (Ondiege *et al*., 2013). In addition, access to roads in Africa is limited to just about 34% of the population, compared with 50% in other parts of the developing world. With regard to ITC, although there has been significant progress in rolling out the necessary infrastructure, largely due to the tremendous increase in mobile connections over the last 10 years, Africa started from a very low base to the extent that its internet penetration rate is only about 6%, compared with an average of 40% in the developing world (Ondiege *et al.*, 2013). Thus,

Africa requires significant investment in infrastructure in order to be as competitive as other emerging blocs namely Asia and South America.

Landlocked countries in Africa face particular challenges due to the lack of multimodal infrastructure. The continent's 15 landlocked countries are constrained in transporting their goods to markets and in bringing in imports because of the lack multimodal infrastructure that can accommodate their particular requirements. Thus the role of a network of infrastructure that links producers to markets through an interlinked platform that includes feeder roads, national roads, airports, and ports in connecting markets, particularly in landlocked countries, cannot be overemphasized (Ondiege *et al*., 2013).

It is widely acknowledged that Africa needs huge financial investments to narrow the existing infrastructure gap in order to be on par with the rest of the developing world. The Programme for Infrastructure Development in Africa (PIDA) states that Africa needs to invest up to US$ 93 billion annually until 2020 for both capital investment and maintenance projects. Taking into account the substantial amount involved, this requires innovative sources of funding for sustainable infrastructure development and investment (Ondiege *et al.*, 2013). Over US$800 billion is invested in infrastructure in developing countries every year. However the needs are estimated to be more than twice that amount, with the infrastructure financing gap estimated to amount to about US$57 trillion until 2030. Funding the infrastructure gap is thus a major challenge (Bilal, 2013). Deficits like these, argue Rwelamila (2015), have a clear impact on African competitiveness: African countries, particularly those south of the Sahara, are among the least competitive in the world, and infrastructure appears to be one of the most important factors holding them back.

This is where investment in infrastructure development through Public Private Partnerships (PPP) as an alternative to the conventional procurement of infrastructure comes in. Before discussing the PPP concept, it is important to first analyse the current situation of the traditional infrastructure investment and its associated challenges and then discuss why the PPP has the potential to become a game-changer for Africa's economic growth and development. The next section discusses generic constraints on project finance.

Key Constraints on Project Finance

Three related sets of factors limit Africa's potential to tap into both foreign and local currency markets for the purposes of raising private finance for infrastructure, especially long term debt (Sheppard, Stephan & Geeta, 2006). Firstly most of the African countries have low or non-existent sovereign credit ratings. The credit rating issued by major international rating agencies such as Fitch Ratings, Moody's Investors Service and Standard & Poor's is a key variable affecting a sovereign's or a firm's access to capital markets. As at 2009, as much as 70 developing countries – mostly poor – and 12 high income countries did not have a rating from a major rating agency. There are several factors that influence a country's reluctance or inability to get rated. For example, the information that is required for the rating process is complex and may not be readily available in many countries, the cost of rating, which is quite prohibitive for most developing countries, is paid for by the subject country (Ratha, De & Mohapatra, 2009).

Secondly, most local financial markets on the African continent have limited capacity to finance infrastructure projects. In almost all other African countries, local long term financing has been limited and infrastructure projects have had to require sizable credit enhancement (for example, through guarantees), provided mostly by official agencies, to attract local currency debt (Sheppard *et al*., 2006). In addition, most of the unrated countries require external credit and resort to relationship based borrowing from commercial banks, or sell equity tom foreign direct investors (Ratha *et al.*, 2009). Lastly, infrastructure projects naturally raise the exposure of investments. In comparison to projects in other sectors, those in infrastructure usually have longer payback and built – out periods and have the tendency to be more vulnerable to political and regulatory interference. This obviously increases the inherent regulatory risk such investments may be facing (Sheppard *et al.*, 2006). Therefore for Africa to be in a position to raise the required finance for its much needed infrastructure there is a need to improve its sovereign credit ratings, the local financial markets must have capacity to finance infrastructure and Africa must manage the specific risks associated with infrastructure investments (Bwanali, 2015). The next section discusses innovative finance solutions.

Innovative Finance: Instruments to Finance Infrastructure

It is imperative that African governments must find innovative ways to fund infrastructure development projects. This can be done by improvising relevant innovative financing models which will not only moderate the impact of these diminishing financial flows, but also to find alternative methods to secure new role players who will push up the level of financing of infrastructure projects (Bwanali, 2015). Innovative financing for development is defined by the World Bank as "those that depart from traditional approaches to mobilizing development finance", i.e., through budget outlays from conventional sovereign donors or bonds issued by multilateral and national development banks solely to achieve funding objectives (UNDP, 2012).

It is in this context that innovative financing models have become necessary for infrastructure development in the emerging economies, especially sub - Saharan Africa, where it is needed most has been very limited. This is largely due to the fact that financing is a major constraint since most of the current investment in infrastructure development comes from the public sector. One such innovative financing model for infrastructure development is the concept of Public Private Partnerships (PPPs). The next section discusses PPPs as an innovative finance model.

PUBLIC PRIVATE PARTNERSHIPS AS AN INNOVATIVE FINANCE MODEL

Participation of the private sector in public service delivery is not a new concept. Over the last 15 to 20 years, a growing market for public-private partnerships has developed globally. Particularly in industrialized countries, the private sector had for many decades serviced public needs through a range of construction, maintenance and management contracts (Rwelamila & Snijder, 2008). It appears that there is no universally agreed definition of PPP. In fact the term public-private partnership (PPP) does not have a legal meaning and can be used to describe a wide variety of arrangements involving the public and private sectors working together in some way (Farquharson *et al*. 2011:9; World Bank, 2009). Therefore this paper will adopt National Treasury of South Africa definition which defines PPP as a commercial transaction between an institution and a private party in terms of which the private party – (a) performs an institutional function on behalf of the institution; and/or (b)

acquires the use of state property for its own commercial purposes; and (c) assumes substantial financial, technical and operational risks in connection with the performance of the institutional function and/or use of state property; and (d) receives a benefit for performing the institutional function or from utilizing the state property.

The unique aspect about PPPs in comparison to other models of private participation in infrastructure is the element of risk sharing. This means that in the event that the contract fails, both government and parties will suffer financially. The US Department of Treasury (2015) states that PPPs bring private sector capital and management expertise to the challenges of modernizing and more efficiently managing assets. Under a PPP, a government contracts with a private firm to design, finance, construct, operate and maintain (or any subset of those roles) an infrastructure asset on behalf of the public sector. The next section discusses benefits of PPPs.

Benefits of PPPs

PPP's have become a global phenomenon because of the benefits they offer in the delivery of public services as follows.

Accelerated infrastructure development

The Commonwealth Secretariat (2010) argues that many governments around the world are constrained in terms of how much they can borrow to invest in infrastructure projects. This is especially true for greenfields developments, such as a new power station or major toll road, which typically involve hundreds of millions of dollars of upfront capital expenditure. The problem is most acute in poorer countries, where infrastructure needs are large relative to the size of economies and where fiscal capacity is often severely limited, with many competing demands for scarce resources. Therefore in order to reverse years of underinvestment in infrastructure development in Africa requires high level political will, broader social consensus and dynamic rethink of how African states can fund and manage infrastructure investments. Some African governments have entered into PPPs to provide and manage infrastructure that has traditionally been provided by the public sector. PPPs bring private sector capital and management expertise which may not available in the public sector.

Greater efficiency in the use of resources

Farquharson *et al* (2011) posit that by allocating the management of risks optimally, between the public and private sectors, a well-managed PPP preparation and bidding process can enable a more efficient utilization of resources over the lifecycle of the asset. Key to PPP projects is the optimal risk allocation and management otherwise the projects would fail.

Improved service quality

PPPs have the potential to bring enhanced innovation and augmented service quality largely due to specialist skills brought in by the private sector. This is possible due to the commercial incentive mechanisms that are put in place to deliver improved performance over the life cycle of the contract (Commonwealth Secretariat, 2010). The main incentive for the public-private partnership is the deficiency in skills and resources required to provide the public with the services they need to support economic activities and social well-being. Thus PPPs reduce

deficiencies by sharing risks and resources for mutual benefits of both the public and the private sector (Henjewele, Fewings & Rwelamila, 2013).

Capital at risk to performance

Farquharson *et al* (2011) argue that the obvious exposure of capital to long term performance risk provides the private party an incentive to design and build an asset on time and within approved budget. This reinforces the expected allocation of possible risks.

Value for money

The growing element in decisions about PPPs is the cost-benefit factor, referred to as value-for-money (VfM). The underlying argument is that the involvement of the private sector in delivering public services must be a better alternative to the public sector providing the same service through its line departments and bureaucratic administrations. PPPs allow governments to introduce private sector capital into a project and also harness private sector management and technical expertise. When a PPP transfers risks to the private sector that it can manage more cost effectively, it can benefit taxpayers by lowering long term project costs, improving the quality of services or both. PPPs allow governments to transfer certain types of risks of infrastructure projects to the private sector. This can bring VfM because in theory the private sector brings specialist expertise and a commercial approach that brings down project costs over the whole life of the contract. In addition, there is increased certainty to taxpayers about the total cost of infrastructure projects because risks of cost overruns are either reduced or passed on to private investors (Commonwealth Secretariat, 2010).

Allocation of risk between private and public sectors is a complex area for PPPs due to the unpredictable nature of project risk (Economist Intelligence Unit Limited, 2015). It follows therefore that if the PPP is properly designed at the outset, these efficiency gains are passed on to the end user.

Open scrutiny

The more open scrutiny of the long term commitment required of a typical PPP project usually requires information on the true long term risks as well as projected costs to deliver the public service (Farquharson *et al*., 2011). This deliberate scrutiny can derive a more informed and realistic engagement on both project selection and possible outcomes. Such scrutiny is rarely present in conventional procured projects.

The next section provides a detailed discussion on the types of risks and their allocation.

Types of Risks Associated with PPPs

Transfer of risk is an element closely linked to the VfM consideration based on the cost associated with service non-delivery and delays in design, construction, and implementation of projects as well as the private sector imperative of business efficiency. Operational efficiency drives the private sector's involvement, especially where contracts values and service fees have been predetermined in legal contracts. Without adequate transfer of risk, the required level of efficiency will not be achieved by the private sector party, which will in turn obscure the value derived from the partnership.

Risks in PPP arise due to uncertainty regarding the occurrence of certain events and their consequent impact on the project. Given the long nature of the contract, there is a possibility of a number of different events occurring such as changes in government policy and decline in demand for the infrastructure service (Commonwealth Secretariat, 2010). Therefore it is critical that there is an appropriate allocation of risks to the party that is most able to mitigate such risks should they occur. The typical risks associated with PPP framework are market risks, development/planning risks, project risks, political risks, regulatory risks and financial risks. These risks are discussed in the following sub-sections.

Market risks

These refer to risks that arise due to uncertainties about the market demand for the infrastructure service. These include, for example, volume risks - which relate to uncertainties arising from the number of users and their frequency and intensity of use of the infrastructure service – and price risks, which arise due to uncertainties in the tariff that can be charged for the use of the infrastructure service (Commonwealth Secretariat, 2010). Thus market risks are closely linked to the users' appetite and ability to pay for the services. In addition, investors look closely at how the risk that they might bear of fluctuations in the use of the service (demand risk) is rewarded by the financial returns available (Farquharson *et al* 2011).

Development/planning risks

These are risks arising from planning or preparing projects for private sector participation. Governments or the private sector may invest substantial amounts to develop a project (through payment for several scoping, feasibility and structuring studies), but bear the risk of the project being infeasible (Commonwealth Secretariat, 2010).

Project risks

Project risks relate to uncertainties in relation to project construction, completion and operation (i.e. activities post award of contract and which occur while implementing the PPP project) and financing, can be split into start up risks, such as capital cost overrun, completion delays and ongoing risks such as operating performance, operating costs and lifecycle costs (Commonwealth Secretariat, 2010). In addition, the size or magnitude of projects is a key factor. Farquharson *et al* (2011) argue that projects that are too small may have difficulty attracting corporate private sector interest as the costs of preparing and managing the project will be high in relation to the investment required. At the same time, projects that are too large may exceed the capacity of bidders and sources of finance.

Political risks

These are risks that arise from wars, civil disturbances, terrorism etc., and include currency transfer restrictions, expropriation, war and breach of contract. Political risks are more serious in certain regions of the world than in others (Commonwealth Secretariat, 2010).

Regulatory risks

These risks arise from the lack of a suitably developed regulatory system which, for example, ensures regulatory independence from the government, regulations for the participation of the

private sector in infrastructure or appropriate periodic review of tariffs can cause considerable uncertainties for lenders and investors in any infrastructure sector (Commonwealth Secretariat, 2010).

Financial risks

Infrastructure projects are impacted by financial risks exchange rate appreciation/depreciation and changes in interest rates, which can have a substantial impact on costs and revenues. The ability to hedge financial risks depends on the level of development of capital markets and/or access to specialist hedging facilities (Commonwealth Secretariat, 2010). Farquharson *et al* (2011) argue that projects without revenue linked to foreign currency are likely to face the most significant constraints in many countries due to the limited availability of long term local currency finance. Key to the design of a PPP is the allocation of these risks between the public and private sectors so as to ensure that the PPP delivers VfM. The essential principle for risk allocation in a PPP is to accord the risk to the party who can best manage it. The next section discusses research methods.

RESEARCH METHODS

This section discusses the literature review approach and motivates the methods of data collection and analysis in the study. A systematic review of past literature is essential for academic research as it uncovers what is already known in the body knowledge (BoK). Thus this paper is based on a literature review. Hart (1998) defined literature review as "the use of ideas in the literature to justify the particular approach to the topic, selection of methods, and demonstration that this research contributes something new". It therefore goes without saying that one of the main reasons for conducting literature review is to enable researchers to find out what is already known.

This study adopts a framework for conducting and writing an effective literature review developed by Levy and Ellis (2006) which may be generalized to any field of social and behavioural science. This framework is based on a systematic data processing approach comprising of three major stages namely (i) inputs (literature gathering and screening), and (ii) processing. The next section discusses inputs commonly known as literature gathering and screening

Inputs

Key to literature gathering and screening is ensuring that quality literature relevant to the study is available as well as the actual process of gathering manuscripts. The quality of literature used plays a significant role in advancing the knowledge of the researcher and the overall BoK (Levy and Ellis, 2006). The use of peer reviewed published material is an effective mechanism to control quality. It is important to note though that not all published material is equal in quality and that only quality research literature from leading, peer-reviewed journals should serve as a major base of literature review as it provides sufficient theoretical background as well as leads for additional references on the subject matter (Levy and Ellis, 2006). The study has reviewed peer reviewed journals such as Rwelamila & Snijder (2008), Rwelamila (2015) and Henjewele, Fewings & Rwelamila (2013) amongst others.

Equally critical is a process of effective literature search. This paper employed *keyword searching* and *backward searching* techniques. Levy and Ellis (2006) define keyword search

as the querying of quality scholarly databases by the use of a specific word or phrase (i.e. "keyword") when attempting to find relevant literature. Some of the keywords that were searched for this paper are infrastructure development, innovative financing model, public private partnerships, risk allocation, value for money etc.

It must be emphasised though that one of the challenges with keyword search as a technique is that certain buzzwords that may appear to be in common use within a specific field have the potential to disappear from the literature overtime. In order to address this phenomenon, it is advisable to go beyond keywords and use a technique called backward search, which as opined by Levy and Ellis (2006) can help researchers to follow models, theories, theoretical constructs, and research streams. This paper used backward references search which is one of the sub-steps of backward search.

Backward reference search

Backward reference search refers to reviewing the references of the articles yielded from the key word search (Levy and Ellis, 2006). A backward reference on Rwelamila (2015) will mean extracting all the relevant references of the author. This process of reviewing the references of selected articles provides an opportunity for researchers to learn more about origins of theory or subject under study. This paper, for instance, reviewed Rwelamila & Snijder (2008), Rwelamila (2015) and Henjewele, Fewings & Rwelamila (2013). The next section deals with processing the identified articles.

Processing

There are various stages undertaken when processing articles namely: knowledge of the literature, comprehension of the literature, application of the literature and analysis of the literature (Levy and Ellis, 2006).

Knowledge Level involves working on the data found in the identified sources and converting it into information that can serve as a foundation upon which new research can be built. This requires of a researcher to have thoroughly read and extracted relevant information from articles. This paper demonstrates, to a large extent, knowledge level mastery of the material reviewed.

Comprehension is demonstrated by activities such as summarising, differentiating, interpreting and contrasting (Levy and Ellis, 2006). This paper has attempted to demonstrate a level of mastery not only by repeating what included in the article but also demonstrates an appreciation of the meaning and significance of the information being reported.

Application is manifested by activities such as demonstrating, illustrating, solving, relating and classifying (Levy and Ellis, 2006). This paper has identified the major concepts such as Value for Money, infrastructure development, innovative financing model, public private partnerships and risk allocation which are relevant to the study.

Levy and Ellis (2006) argue that analysis is demonstrated by activities such as separating, connecting, comparing, selecting an explaining. This paper has attempted to demonstrate analysis level mastery by identifying why the information that has been presented is of significance.

The research approach adopted by this study has reviewed the current state of the BoK in that is has revealed what is already in the public domain. In addition, the study makes a practical contribution to the BoK through a thorough and systematic examination of how some developing economies have institutionalised PPP as part of their development strategy.

Based on literature reviewed, this paper has identified common challenges associated with PPPs. These challenges together with possible remedial measures are presented in the following sub-sections.

Challenges with PPPs and Possible Remedial Measures

Apart from the specific risks identified earlier, PPPs have some inherent challenges especially in the developing countries and this could be the major reason why there has been little or no progress in implementing PPP projects in most African countries. Common challenges identified are lack of political acceptability of PPPs; lack of clear policy statement; weak capacity of the public sector; an inappropriate enabling environment in terms of legal, regulatory and institutional frameworks; the high costs and risks of project development facing the private sector; absence of long term debt; inability of users to afford service fees and the small size of the economy/sector. These challenges impact both the government and the private sector thereby affecting the development and implementation of effective PPPs. The challenges are discussed below.

Lack of political acceptability of PPPs

As discussed earlier, traditionally the provision of social infrastructure for service delivery has been the responsibility of government. Therefore it becomes politically sensitive to involve the private sector in the provision of core infrastructure. The key reasons for such resistance include the perception that tariff might be higher as the private sector is profit oriented, possibility for mass job losses in order to contain overheads and the fear of privatization. The creation of dedicated PPP units, putting in place a mechanism of strong political support along with high level political champion could manage the political resistance. The Labour Movement in South Africa has been at the forefront of protesting key PPP projects such as e-toll in Gauteng as well as planned projects in Cape Town. Part of the resistance can be attributed to stakeholders' lack of awareness in the concept of PPP as well stakeholders being denied access to detailed and "sensitive information" contained in the consortium's PPP proposals (Ei-Gohary et al, 2006). In Tanzania, a gas fired power plant to address severe power shortages and a dependence on external fuel supplies was successful due to a stable political environment that enabled it to attract significant long term investment (The World Bank, 2009). Also in Mozambique, a 15 year concession to finance, rehabilitate and upgrade the ports of Maputo and Matola enjoyed strong political support by both the South African and Mozambican governments at the very highest level (The World Bank, 2009).

Lack of clear policy statement

The success of a PPP programme requires formal support in terms of clear policy statement on the government's strategy for the development of infrastructure PPPs. The lack of a clear policy statement will imply uncertainty and ambiguity, and projects may therefore not get off the ground. Governments need to develop explicit PPP policies and include the use of PPPs in their planning documents (Commonwealth Secretariat, 2010).

In South Africa, National Treasury has developed a framework document on PPP and managed through the Public Finance Management Act (PFMA). In addition, the National Development Plan 2030 has identified public infrastructure development through PPPs, amongst other finance instruments, as one of its top 10 critical actions. Elsewhere, the contract for the project to finance, rehabilitate and upgrade the ports of Maputo and Matola in Mozambique clearly defined the investment and operational obligations of the consortium (The World Bank, 2009).

Weak capacity of the public sector

Lack of appropriate skills and experience in infrastructure PPPs can lead to delays, inefficiencies and sometimes the failure of infrastructure projects. Poor project development skills in the public sector can lead to the preparation of 'unbankable' projects, a common issue to many countries, where the project design and structure is unattractive to private investors. Moreover, weak capacity in the public sector reduces government's ability to negotiate and communicate effectively with private companies (Commonwealth Secretariat, 2010). As a way of capacitating the public sector on PPPs, some countries have established PPP units that provide governments with expert advice and support on infrastructure PPPs. According to the Economist Intelligence Unit Limited (2015) only 12 African countries have developed central PPP units and their functionality varies from established bodies (South Africa) through to newer start-ups (Uganda and Tanzania). Central PPP units bring advantages such as better coordination, increased efficiency and a clustering of relevant skills in a single place. In Mozambique, the government used the knowledge acquired in the port deal to close the rail deal more quickly and efficiently than might otherwise have been the case (The World Bank, 2009).

Inappropriate enabling environment (legal, regulatory and institutional frameworks)

The private sector participation requires an enabling legal, regulatory and institutional framework that will guide and support transactions. Many countries do not have legislation to regulate infrastructure PPPs or a regulator that monitors performance and ensures compliance (Commonwealth Secretariat, 2010). In South Africa, Treasury Regulation 16 on PPPs which is issued in terms of the PFMA 2004 is a vital legislation for PPPs which articulates the procedure, approvals and management of PPP transactions. According to the Economist Intelligence Unit Limited (2015) despite good progress, PPP laws often are stronger on paper than in practice. Nigeria and Zambia for instance, have strong legislation pertaining to issues like bidding transparency and dispute resolution, but these are not always effective in practice. In Mozambique, rehabilitate and upgrade the ports of Maputo and Matola had good stakeholder capacity to shape the vision for the overall corridor taking into account both public and private sector dynamics (The World Bank, 2009).

High costs and risks of project development facing the private sector

Early stage development involves a significant investment of resources that are only recoverable if the project is ultimately successful. In addition, in many developing countries, the private sector is at an early stage of development and lacks the knowledge to develop, prepare and structure projects. As a result, infrastructure projects are not fully defined or, if they are, they may be developed to such low standard that competent private sponsors or investors will not be interested (Commonwealth Secretariat, 2010). One way of addressing this challenge is by establishing a fund for project development. According to the

Commonwealth Secretariat (2010), India has set up the India Project Development Fund with the objective of structuring and developing bankable projects that can be offered to the private sector on a PPP basis. The Development Bank of Southern Africa which is based in South Africa plays a similar role. In Algeria, the government decided to involve the local banking system in the financing of PPP projects. This resulted in the Banque Nationale d'Algerie (BNA) providing a Spanish consortium to design, build, own and operate a seawater desalination plant. The terms of the nonrecourse long term funding allowed the project to eliminate foreign exchange rate risk and increase its gearing (The World Bank, 2009).

Absence of long term debt

A 20 year life cycle for an infrastructure project implies a considerable time lag between the raising of finance and the ability to pay back through project generated revenues. In most developing countries, it is not possible to raise finance of sufficiently long tenure for infrastructure development. This not only constrains the development of infrastructure due to increased uncertainty, but also makes the infrastructure service more expensive in the short term because of the front-end loaded prices and other factors (Commonwealth Secretariat, 2010). As a counter measure, some governments such as Bangladesh and India have set up project financing facilities aimed at crowd-in private sector finance by taking up greater risks in the project. The Government of Bangladesh has set up the Infrastructure Development Company Limited (IDCOL) and the Government of India has set up the India Infrastructure Finance Company Limited (Commonwealth Secretariat, 2010). These are the type of project financing facilities that African governments should establish to help crowd-in private sector finance.

Inability of users to afford service fees

Perceived lack of ability and willingness to pay for infrastructure services is a key challenge in most developing countries. According to the Commonwealth Secretariat (2010), it is often believed that large numbers of people on lower incomes will be unable to afford full cost-recovery tariffs for electricity or water, especially if the tariff level reflects the high costs of building greenfield infrastructure. In addition, many people may be perceived as being unwilling to pay for essential infrastructure services for political or social reasons such as the e-toll system in South Africa. In instances where it is impractical to levy user charges to recover costs, governments will have to find alternative sources of funds in the form of subsidies.

Small size of the economy/sector

The size of the economy or infrastructure sector is also an important constraining factor limiting the development of PPPs for the delivery of infrastructure services. Small size implies lack of economies of scale in project development, as well as a project size which is below the minimum that is efficient. While size is a constraint for public provision of infrastructure services as well, this is particularly so for PPPs, as a small scale project may be 'unbankable' (Commonwealth Secretariat, 2010). One way of improving economies of scale is by initiative regional projects which will result in pooling of resources. A good example within the African context is the Inga hydropower plant to be developed in the Democratic Republic Congo, which is said to have the potential of illuminating the entire African continent, would not be economically viable as an investment by a single country when other

countries in the region can benefit from such an investment. The next section looks at the emerging best practices on PPPs and key lessons that can be used by other African government when developing PPPs.

Emerging Best Practices on PPPs and Key Lessons Learned

Based on various academic literature, successful PPPs projects have the potential to deliver significant benefits in terms of increased quantity and quality of infrastructure services at lower overall cost for both end users and taxpayers only if appropriate incentives are in place for the private partner to deliver efficiently. However when PPPs fail, costs can be high which would result in long and exorbitant legal disputes. This would also result in wastage of public funds resulting in a drop in spending on other important infrastructure services. Ultimately this results in poor service delivery. In order to avoid PPPs failure, it is advisable to take a long term view in managing PPPs. According to the Commonwealth Secretariat (2010) many of the key lessons on PPPs are therefore related to the need to take a long term view when designing and implementing a PPP programme. This paper has synthesized three main sets of lessons emanating from the literature study undertaken by the authors and these are discussed in the next section.

KEY LESSONS

This paper has highlighted potential opportunities, risks and challenges that some countries have encountered in the implementation of PPPs for infrastructure development. To ensure that other African governments can learn from these experiences, the following key lessons are presented.

Lesson 1: Design PPPs with long term approach and VfM considerations

As stated earlier, PPPs allow governments to introduce private sector capital into a project and also harness private sector management and technical expertise. The ability to raise funds for infrastructure projects is attractive to governments as they can avoid short term budgetary constraints by spreading up-front project costs over the lifespan of the project. However African governments must avoid the pitfall of viewing PPPs only as a mechanism of raising the much needed and scarce capital. The success of a PPP programme should be assessed against quantity, quality and cost of infrastructure services provided to the public over the long term. The following are key aspects that would ensure long run sustainability and value for money of PPPs are the following: robust feasibility analysis; proper due diligence in selecting a strong private sector sponsor and good project and contract design.

Robust feasibility analysis

In the early years of modern PPP programmes in Europe and America, a common mistake was for government and project sponsors to overestimate future revenues on PPP contracts. Nowadays there is more awareness of the importance of robust feasibility analysis which incorporates various scenarios about key revenue and cost drivers. In emerging markets, there is often the challenge of a lack of data to inform a feasibility analysis. For example, there is no tangible evidence on the number of potential end users of a required service which impacts the potential tariffs or user charges to be levied. This results in unreliable feasibility analysis to determine whether the project will be economically viable.

Proper due diligence in selecting a strong private sector sponsor

In selecting a private partner for the successful implementation of a PPP contract, it is critical for governments to undertake a wider assessment of the capability of the sponsor to manage unexpected events as they occur. It is advisable that governments undertake thorough due diligence to establish whether or not the contract will deliver VfM. The South African government through National Treasury has factored VfM considerations into its PPP legislative framework which requires the accounting authority to obtain treasury approval that the PPP agreement meets the requirements of affordability, VfM and substantial technical, operational and financial risk transfer as approved in terms of the applicable treasury regulation.

Good project and contract designs

Projects need to be bankable in order to attract private sector investment. Key aspects for project bankability are risk allocation, incentives and affordability. These aspects determine whether a project is good or bad. It is not sufficient to have a good project design without an equally good contract design. Thus good contract design warrants that: (i) the processes and procedures for the PPP are clearly spelt out; and (ii) the measures for evaluating the performance of the PPP are clearly laid out. This means that all relevant aspects of the contract are clearly spelt out and that the approach and basis of contract evaluation are clear in order to avoid ambiguities.

Lesson 2: PPPs are a long term relationship between the public and private sectors

In a PPP framework, the role of government remains relevant over the full lifecycle of the project. This long term nature of PPPs has implications for the PPP framework, ongoing management of the contract and the skills and experience required in the public sector.

Establish a flexible PPP framework

The creation of a PPP framework enhances the long term success of PPPs. A PPP framework establishes rules of the game in that it provides a platform for ongoing dialogue and cooperation between the public and the private sectors. The framework should not be rigid to an extent that it limits a process of renegotiation in cases where unexpected events occur which are beyond the control of either party.

Ensure effective ongoing management of the PPP contract

As highlighted earlier, the role of government remains relevant over the full lifecycle of the project. As such, efficient contract management and monitoring are key success of the project. Since the project is financed with public funds, government has an obligation to manage the PPP contract so as to ensure that the desired outcomes and expectations of the public are met. Key to this is the performance monitoring mechanism of the PPP which should keep track of possible deviations as well as consequence management whenever required.

The need for skilled personnel with the public sector

PPP are complex transactions which call for highly skilled and competent staff. It is important that both parties have the right skills set in order to implement PPP projects successful. The public sector personnel tasked with the responsibility to negotiate contracts with the private sector must possess specialist legal, financial and technical skills. In addition, there should be a regular and effective communication channel between the two parties.

Lesson 3: Avoid Rushed Project Development Process

PPPs are by nature complex transactions and normally project development phases last a minimum of three years before finance is secured and any meaningful construction takes place. This has the potential to cause conflict with short term political dynamics. There could be a temptation for governments to short circuit the project development process in order to deliver on public expectations of improved services from a PPP programme. A high level political support as well as suitable management of political and public expectations on PPPs is crucial to their success. In addition given the complexity of PPPs, expert advice is very important.

High level political patronage is vital

Any project requires a champion: someone to articulate and refine the vision, guide process, and advocate for support. For PPPs, political champions are very vital, given the significant public stake in them. It is essential that PPPs transactions have political champions within the government machinery who can drive these projects through required legislation and other regulatory processes. An effective PPP unit can play a very critical role in pushing PPP projects up the political agenda for broader public buy in. In addition, strong government commitment to PPPs would boost private sector confidence in investing in these projects.

Management of political expectations

It is advisable to avoid the temptation of 'overselling' PPP projects early in the project life cycle for political expediency because of the risk of creating unrealistic public expectations. It may be prudent to target 'quick wins' in order to build public support for the project. A good example was the upgrading of highways/freeways leading to the 2010 FIFA World Cup within the South African context.

Relevant expert advice is expensive but necessary

Investing in expert advice in fields such as financial, legal and technical can be expensive but it is necessary due to the fact professionals with relevant international expertise and experience on PPPs are in scarce supply. This investment is essential to ensure the project is properly designed and structured. It is equally important that the public sector has access to high quality advisers to make sure that there is an equitable sharing of costs and risks with the private sector.

CONCLUSION

This paper confirms that developing a successful PPP programme is a complex undertaking which requires the public sector to have relevant skills levels as well as an appropriate legal

and regulatory framework. It is only through the leveraging the strengths of both public and private sectors that PPPs as an alternative to the traditional procurement system, can become a vehicle for delivery public infrastructure which can boost economic growth for the developing economies in Africa.

Note: An earlier version of this paper was presented and published in the proceedings at the 9th cidb PG Conference, Cape Town, South Africa.

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