

# Complexity of Implementing Public-Private Partnerships as an Alternative Funding Instrument for Infrastructure Projects

**T Mandiriza\***

School of Public Management and Administration  
University of Pretoria

**D J Fourie**

School of Public Management and Administration  
University of Pretoria

**O S Madumo**

School of Public Management and Administration  
University of Pretoria

## ABSTRACT

Government is hampered with infrastructure backlogs due to financial constraints and rapid urbanisation exacerbates this challenge. Hence, public-private partnerships (PPPs) are an emerging financing mechanism for infrastructure projects given the constraints to government finances and the inability of municipalities to increase their borrowing due to poor credit worthiness. PPPs in a simplistic form involve the private sector delivering public goods and services for a fee. The success of PPPs in some countries has led governments across the world to explore PPPs as an alternative funding instrument for infrastructure projects.

Despite the promises of efficiency associated with PPPs as envisaged by New Public Management (NPM), the implementation of PPPs faces a myriad of problems. The study found that PPPs are complex, take time to conclude, the value for money is questioned and they are subjected to political interference, among other things.

## INTRODUCTION

In this article a PPP is defined as: "... a contract between a [government entity, for example,] a municipality and a private party in which the private party assumes

substantial financial, technical and operational risk in the design, financing, building and operation of a project” (National Treasury 2005:6).

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

In addition, to the mistrust of government delivering long-term services to citizens, the efficient use of capital emanating from the private sector ethos drives the adoption of PPPs (Hodge *et al.* 2018:1109). PPPs are regarded as an effective mechanism to mitigate excessive budget escalations and contract extensions due to poor infrastructure implementation of large projects by the public sector (Warsen *et al.* 2018:1165). The public sector’s need for “on-time and on-budget” infrastructure delivery which is a symbol of political achievement and may accrue political benefits underpins the attractiveness of PPPs. Budget overruns are viewed as government’s failure and may have negative consequences in elections, and the use of PPPs may shield such potential shortcomings (Boardman *et al.* 2016:11).

As noted above, the success of PPPs in some countries that led governments to implement PPPs as an alternative funding instrument for infrastructure projects, also has its own challenges. Therefore, the article aims to uncover the impeding factors for the use of PPPs by public sector entities. Against this background, this article first conceptualises PPPs. It highlights the stakeholders involved in PPPs and also discusses the types of PPP contracts. It provides a brief value proposition for PPPs. It then focuses on the problems with PPPs in terms of its complexity, lengthy contracting period, value for money, governance and accountability, impact on government workers, transactions costs associated with PPPs, political influence and corruption and pricing of services through PPPs.

## **CONCEPTUALISING PUBLIC-PRIVATE PARTNERSHIPS**

The concept of PPPs appears straightforward, yet it has many facets, resulting in no universally accepted definition (Thiemann & Volberding 2017:8). The adoption of different PPP models across several countries contributed to the difficulty of pinpointing the precise definition of PPPs (Hodge, Greve & Biygautane 2018:1108). Despite PPP model variations, Bovis (2015:200) describes PPPs “as a sophisticated interface between public authorities and private sector undertakings with

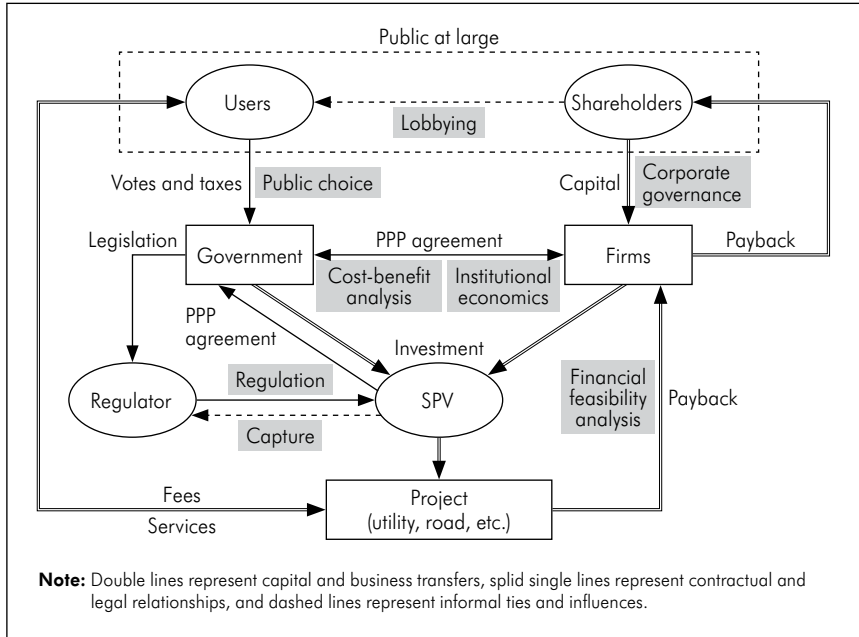
an objective of delivering infrastructure projects, public goods and services". PPPs integrate the private sector in service delivery beyond arm's-length transactions of which "both public and private sectors have a stake in their success" (Boyer, Van Slyke & Rogers 2016:7; Lohmann & Rotzel 2014:6; Bovaird 2004:200). The cooperation between public and private actors by way of PPPs supplements or replaces the traditional role of government to provide public services (Schomaker 2020:2). For Lonsdale (2007:312) PPPs entail a 'family of techniques', comprising the multiplicity of government-business agreements. In most cases, the execution of new PPP projects is done through a special purpose vehicle (SPV), which acts as a separate legal entity established to implement the project. A SPV protects the joint venture partners from financial liability of their parent firms (Boardman *et al.* 2016:2). An SPV is expensive to form given the number of firms involved and various fields of expertise such as construction, engineering, finance and facility management, among others (Iossa & Saussier 2018:31).

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

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

Other terms used to describe PPPs include private sector participation (PSP), private finance initiatives (PFIs), private participation in infrastructure, privatisation, private finance projects, private sector contracting, public alliance, privately financed projects and non-profit partnership (Hodge *et al.* 2018:1106). Despite some resemblance between privatisation and PPPs, privatisation "involves the full or partial transfer of state-owned assets to the private sector" and includes the day-to-day operations by the private sector while the government acts as the

**Figure1: Stakeholders involved in PPPs**



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

regulator (Boardman *et al.* 2016:4). Chowdhury and Chowdhury (2018:53) note that PPPs form part of an alternative service delivery (ASD) mechanism where public goods delivery is undertaken by the private sector.

PPPs may be considered as an avenue for the provision of infrastructure through a complex network of government and private sector linkages (Casady 2020:162). Warsen *et al.* (2019:375) note that PPPs succeed on the basis of networks (relational) and contractual arrangements. Also, services delivered through PPPs have to contend with several stakeholders from both government and the private sector. In a regulated sector, government's role transcends to the setting of tariffs/fees, setting standards and being politically accountable to citizens, among others, as shown in Figure 1. The private sector players equally have to deliver shareholder value by ensuring positive returns to capital invested (Siemiatycki 2015:166).

## TYPES OF PUBLIC-PRIVATE PARTNERSHIP CONTRACTS

PPPs take several forms from financing, designing, construction and maintenance/operation of public sector infrastructure using private sector firms (Boardman &

Vining 2012:119). Boardman *et al.* (2016:2) assert that a typical PPP bundles the design, construction, financing, operation and maintenance as a single project. Schomaker (2020:2) argues that cooperation models in PPPs vary in respect of design to create a balance between the managerial independence of the private partner and to foster accountability of government.

Cooperation may mean the demarcation or separation of responsibilities (horizontal relations) or shared responsibilities between the parties which results in the blurring of the lines of accountability in the citizens' eyes (Schomaker 2020:3). Accountability takes various forms including political, legal, administrative, professional and social forms, among others. In its simplistic form accountability exhibits characteristics such as transparency, liability and the imposition of penalties for poor performance (Mörth 2009:193).

PPP contract types include "service contracts, management contracts, lease contracts, build-operate-transfer (BOT) and similar arrangements, concessions and joint ventures" (Ham & Koppenjan 2002:604). The level of private sector involvement varies depending on the contract type.

## **Service contract**

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

## **Management contract**

A management contract involves daily management and operation of the public service by the private partner (Reynaers 2014:42) and the duration of the contract is three to five years (Fleta-Asin *et al.* 2020:1514).

## **Lease contract**

Under a lease contract, "the private partner is responsible for the service in its entirety and undertakes obligations relating to quality and service standards" while the government finances the infrastructure (Fleta-Asin *et al.* 2020:1514).

## **Concession agreements**

In concession agreements, "the private partner (concessionaire) is responsible for the full delivery of service" which includes raising funding, construction,

operating, maintenance and management of the infrastructure. Under a concession agreement, the public sector's position shifts to monitoring of the service and in some instances is involved in setting of tariffs (Forrer *et al.* 2010:475). There are many variations of concession agreements which include "build-operate-transfer (BOT), build-own-operate (BOO), design-build-operate (DBO), design-build-finance-operate (DBFO), design-build-finance-maintain-operate (DBFMO) and design-build (DB)" (Reynaers 2014:11). In the United Kingdom, PPPs in the form of DBFMO are commonly referred to as PFIs (Boardman *et al.* 2016:2).

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

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

## **VALUE PROPOSITION OF PUBLIC-PRIVATE PARTNERSHIPS**

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

The transfer of significant risk, performance-based remuneration, and management skills to the private partner are cited as some of the reasons in supporting the adoption of PPPs (Opara & Rouse 2019:81). The transfer of the project risk to the private sector enables infrastructure projects to be executed within set timelines and within a set budget. However, failure to meet defined targets may lead to reduced private sector profits in the long run. PPPs in this context

are seen as offering inducements to the private sector to be efficient, as most of the funding risks rest with the private partner (Chung & Hensher 2015:13). Boardman *et al.* (2016:9) argue that the private sector may avoid its fair share of risk by effectively pricing this risk into project costs, and in instances where the project fails, government takes over the project at own cost to minimise the political risks.

Performance-based remuneration is often cited as a motivation to use PPPs (Iossa & Saussier 2018:28). The compensation of the private partners in a PPP arrangement may be done in three ways, (i) an agreed periodic payment from government made through budget allocations from the fiscus (referred to as unitary payments or “availability payment”), (ii) collection of user charges or tariffs by the private partner, and (iii) “shadow tolls” or payment from government which is based on usage of the asset (“usage payment”) (Schomaker 2020:812). Private partners are known to use an aggressive or punitive credit control process to achieve better collection levels. This is the case because the private partner may not be subjected to significant political interference while enforcing credit control processes (Boardman *et al.* 2016:9).

Avoidance of upfront project costs by government provides another motivation for PPPs, as private partners have the ability to complete the project on time and on budget (Boardman *et al.* 2016:1). Ortega, De los Angeles Baeza and Vassallo (2016:203), argue that avoiding capital outlay by government as the only motivation for PPPs is misplaced. However, the pursuit of efficiency only may lead to excessive investment and under-utilisation of the infrastructure asset in the future (Ortega *et al.* 2016:203). The focus on circumventing the budget outlay by government results in a cost benefit analysis, value for money assessments and adequate risk allocations not being conducted (Ortega *et al.* 2016:203).

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

PPPs have both ideological and political connotations in that the proponents of classical liberal philosophy shun the coercive power of the state in the process of delivering public goods. This coercive power is alleged to endanger the personal freedoms of citizens and forces citizens to be overly reliant on the services provided by the public sector (Fernandez, Smith & Wenger 2006:59). PPPs in this regard provide a unique opportunity to limit the power of the state, protect rights of citizens and promote human enterprise (Fernandez *et al.* 2006:59). Consequently, PPPs pose a threat to employment in the public sector due to the

desire for a smaller government with fewer bureaucrats, while the private sector delivers public services (Fernandez *et al.* 2006:59).

PPPs have witnessed better delivery of some infrastructure projects compared to public sector delivery (Moszoro & Krzyzanowska 2011:1). Consequently, pressure from the citizens led administrators to explore alternative service delivery methods including PPPs. Bender and Gibson (2010:45) reviewed the first 10 years of the concession in the Mbombela Municipality in South Africa and concluded that the PPP improved the management of the water ecosystem, and that water access and quality improved, and expenditure on government grants for infrastructure projects improved. The efficiency consideration drives the use and adoption of PPPs by some governments.

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

## **PROBLEMS WITH PUBLIC-PRIVATE PARTNERSHIPS**

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

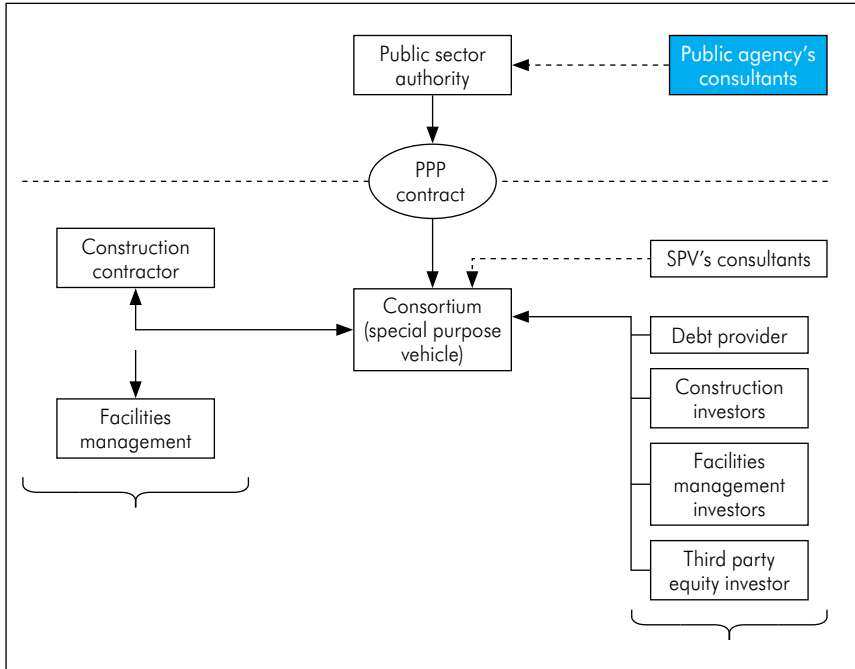
### **Complexity of public-private partnerships**

The complexity of PPPs arises from multiple factors such as the procurement process, contracting, the negotiation process and project implementation, among others (Boyer & Newcomer 2015:130). The complexity arises due to marked differences between traditional contracting and PPP procurement. PPPs require, among other things, value for money analysis, contribution by government to the partnership and the distribution of risks between the private and public sector (Boyer & Newcomer 2015:130). Traditional public procurement contracts generally do not involve bundled services and are therefore simpler compared to PPP projects which consist of design, finance, building and operation contracted to a consortium of private sector companies (Iossa & Saussier 2018:28).

Bundling services induce complexity in contracting as the consortium of firms may include firms in the following fields: construction, facility management, finance, legal and engineering, among others (Iossa & Saussier 2018:28). Bundling of services involves integrating various partners or even institutions to manage a single PPP project which can be a megaproject. This integration is essential



**Figure 2: An illustration of the PPP structure involving many players**



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

to bring various skills to the project and enable coherent service delivery, but it also brings its own complexity due to the vertical interdependencies of the partners who provide complementary services to the infrastructure sector (Sturup 2019:461). Figure 2 shows the interdependencies among various consortium partners which adds to the complexity of the PPP arrangements.

The high level of differences between traditional and PPP contracting is condensed in Table 1 to illustrate the complexity of PPPs.

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

In addition to the pursuit of self-interest by various parties to the PPP arrangement, the different set of values for each of these stakeholders adds to the complexity (Mouraviev & Kakabadse 2015:775). PPPs represent a set of relationships

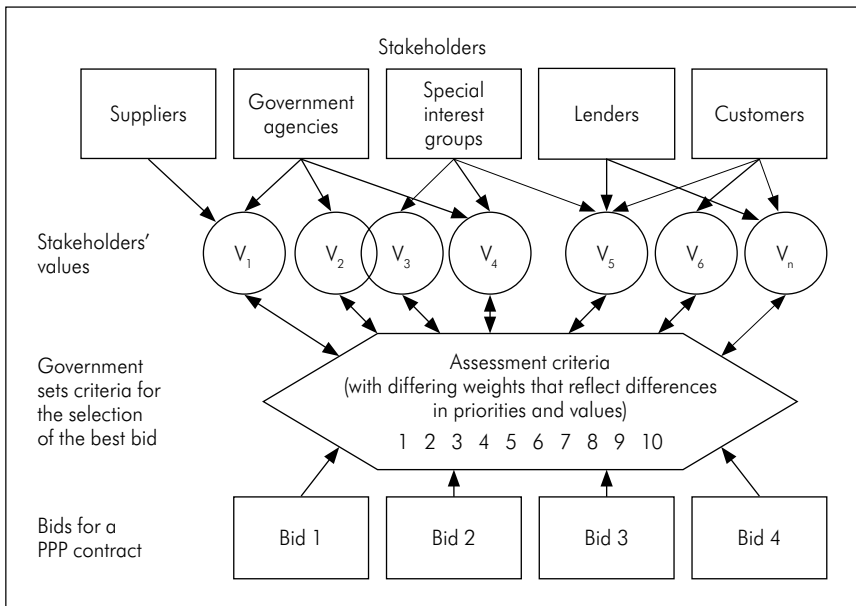
**Table 1: Traditional contracting vs PPP contracting**

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

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

involving many private partners under a common special purpose vehicle within the public sector. PPP arrangements can therefore be considered as a cooperative effort for the purpose of deriving benefits to the various stakeholders, but this does not negate their differences in values (Mouraviev & Kakabadse 2015:774). Figure 3 highlights the linkage between stakeholder values and the way in which

**Figure 3: PPP stakeholders and differing values**



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

bids are selected. Values are different for each stakeholder with some possibility of overlap and the non-uniformity of these values adds to the complexity of PPPs. Mouraviev and Kakabadse (2015:773) argue that by developing the bid criteria, government is expressing its own set of values which the bidders have to express as an interest.

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

## **Lengthy contracting period**

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

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

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

## Value for money

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

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

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

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

## Governance and accountability

PPPs significantly alter the social and political functioning of the way in which governments operate and their interaction with citizens (Opara & Rouse 2019:80). Governance refers to the rules that parties agree to (rules of the game), that is, who is responsible for execution and takes responsibility for certain activities in a PPP arrangement (Skelcher 2010:292). Other aspects related to governance include how decisions are made, for example, consultation with all parties to foster transparency (Skelcher 2010:292). Skelcher (2010:293) outlines four facets of governance, namely legal governance (conformity to the law), regulatory governance (system of rules), democratic governance (accountability) and corporate governance (procedures of decision-making).

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

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

Bishop and Waring (2016:469) argue that PPPs should create a healthy balance between granting the private partner some degree of authority and the need to monitor the activities of the private partner. This balancing act requires a review of the old-style governance structure to ensure the protection of the public interest and also reduce potential exploitation or opportunistic behaviour of the private partner (Skelcher 2010:301). The framework for the balancing of risk and reward is a key governance challenge that has to be addressed and specific skills are

required to maintain this balance (Bishop & Waring 2016:470). Klitgaard (2012:5) observes that PPPs provide insufficient protection for “public values and public interests” given the “total control” of the operations by the private partner replacing the old and traditional governance structure of government.

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

## **Impact on government workers**

Public sector employees are concerned if the service delivery mechanism changes from exclusively government to the private sector or a combination of the two models and alters the underlying culture and ideology of the two organisations (Bishop & Waring 2016:472). Labour unions representing private sector employees are generally supportive of PPPs due to the expansion of employment opportunities for its members and the opposite is true for public sector unions (Siemiatycki 2015:173).

Boardman *et al.* (2016:20) observe that PPPs materially minimise the negotiating power of public sector unions given the likely increase of employees from the private sector. The reduction in bargaining power may compromise salary negotiations leading to stagnant remuneration or reduction of real wages over time.

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

The conflict arises from a number of sources. Madimutsa and Pretorius (2018:318) attribute the changes in industrial relations to the dual chains of command created by PPPs, one involving a private sector company monitoring its own workers and second, public sector managers playing an oversight role on private sector employees. The management of public and private sector employees within a close interorganisational network is a complex undertaking, especially in

tasks that are jointly performed (Bishop & Waring 2016:473). Cultural differences take various forms which include (Bishop & Waring 2016:473):

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

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

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

## **Transaction costs associated with PPPs**

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

rely on private sector experts to deal with complex negotiations and finalise commercial agreements. The private sector may take an opportunity to derive higher rents due to the limited skills in the public sector (Saussier, Staropoli & Yvrande-Billon 2009:13). An example of the inferior strategic planning skills by the public sector is the emergence of underutilised infrastructure (white elephants) due to overengineering or initial undercosting which tremendously escalates during project implementation (scope creep) (Hall 2015:33; Saussier *et al.* 2009:13). Given the pursuit of self-interest by private parties, effective contract management is vital in PPPs to ensure that the public interest objectives of the project are realised and protected for the duration of the project (Hall 2015:33).

PPPs are complex arrangements and are therefore comparatively expensive for the entire duration of the project (Reeves *et al.* 2017:1072). The full extent of the costs involved in a PPP project is not always fully accounted for given that some activities are done by bureaucrats who are salaried employees (Hall 2015:27). The PPP units form part of the government bureaucracy and provide transaction advisory services and post-implementation monitoring, and these costs are usually not reported as part of the total transaction costs. Irrespective of the exclusion of other costs, PPP transactions are deemed to be exorbitant and may range between 1 to 3% of the total costs associated with the project (Boardman *et al.* 2016:21).

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

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

Transaction costs vary from 3 to 5% of the total contract value for countries with well-established PPP frameworks and this can increase from 10 to 12% in new or pioneering projects (Saussier *et al.* 2009:10). The implication of the high transaction cost is that it may discourage government to undertake projects



through PPPs, especially if the likely benefit from PPPs versus traditional procurement is uncertain (Reeves *et al.* 2017:1080).

## Political influence and corruption

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

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

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

Corruption risk or more generally unethical behaviour in PPPs arise from two fronts, first, by influencing politicians to implement infrastructure projects through PPPs and second, by influencing bureaucrats to award the PPP project to a specific private consortium (Schomaker 2020:812). Influencing the financing of a project via a PPP arrangement faces high risks given the uncertainty of the “briber” to be awarded the contract when tendering takes place at a later stage (Schomaker 2020:814). The stakes are high for the private sector partner who would therefore seek to also influence the bureaucrats to award the contract thus making PPPs a potential avenue to fuel corruption. Corruption at the tendering stage is not only peculiar to PPP procurement but also common in traditional procurement methods, and corruption may even take place in PPPs without the politicians being influenced to deliver infrastructure through PPPs (Hall 2015:33; Schomaker 2020:814). Similarly, the same process of influencing politicians and bureaucrats may unfold in relation to extension of the contract, contract re-negotiation or

contract renewal (e Neto, Cruz, & Sarmento 2019:555). Electoral cycles also result in politicians requesting either increasing the scope of the project to garner more votes or opportunistically renegotiating an existing contract for personal gain, a practice known as strategic misrepresentation (e Neto *et al.* 2019:555). The repercussions of the unethical behaviour are summarised in Table 2.

**Table 2: PPP features and potential unethical behaviour**

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

**Source:** (Adapted from Schomaker 2020:813).

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

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

efforts to attract private investment and the long-term impact is subdued due to innovative solutions associated with private capital (Scribner 2011:2).

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

Pusok (2016:687) investigated the impact of corruption on PPPs in selected countries and concluded that corruption impedes the appetite of private foreign investment, crowds-out private sector investment and negatively affects the overall effectiveness and efficiency of PPPs. Countries with dilapidated infrastructure and in desperate need for PPPs often face "dictatorship, crony capitalism, crony NGOs, cultures of bribery, high incidence of corruption and ineffective legal systems" which collectively disincentivise private sector investment (Hammami, Ruhashyankiko & Yehoue 2006:18).

In reference to PPPs, politics and corruption in the United States of America, Nobel prize winning economist Paul Krugman makes the following observation (Krugman 2012): "As more and more government functions get privatised or have private sector participation, states become pay-to-play paradises, in which both political contributions and contracts for friends and relatives become a quid pro quo for getting government business. Are the corporations capturing the politicians, or the politicians capturing the corporations? Does it matter? ... a corrupt nexus of privatisation and patronage that is undermining government across much of our nation".

## **Pricing of services through public-private partnerships**

Decentralisation of services and private sector delivery allows for strict credit control for non-payment of services and institutes cost-recovery of services (Arroyo-Rincon 2016:40). Credit and debt collection policies must be instituted in instances of failure to pay for services by residents in line with municipal policies (Oosthuizen & Thornhill 2017:436). Strict credit control and cost-recovery pricing invokes intervention from politicians due to citizens' complaints, especially for essential services such as water (Pusok 2016:679). While the private sector may bring about efficient services, higher prices and strict credit control sparks a political storm which may lead to the government putting pressure on the private

partner (Farlam 2005:36). This intervention may reduce the attractiveness of PPPs. Hall (2015:31) notes that PPPs in the water sector in France led to higher water prices by around 16.6%.

## **CONCLUSIONS AND RECOMMENDATIONS**

The funding options available to municipalities to deal with water infrastructure include transfers or grants from national government, long-term borrowing from financial institutions (including issuing bonds), own revenue sources (service tariffs) and entering into PPPs. However, PPPs are hardly used to fund municipal water infrastructure projects. PPPs are anchored in NPM and NPG. PPPs capture both the policymaking and the implementation/service delivery processes (associated with NPM). PPPs act as a tool for the delivery of infrastructure services through a network of arrangements between the public and private sector. The use of PPPs by government can therefore garner immediate political credit by delivering projects instantly to attract votes, while shifting some of the expenditure to the succeeding government and political leaders.

Based on international experience, large cities and metros in South Africa should have specialised PPP units to promote and create awareness of the potential use of PPPs. The eight metropolitan cities in South Africa account for a significant portion of the total capital budget for all municipalities and therefore have capacity for dedicated PPP units. Specialised PPP units within large cities will assist in ensuring the development of internal skills, develop a sustained project pipeline and facilitate close interaction with national and provincial treasuries. The development of a long-term project pipeline might address the perception that PPPs take a long time, as the project planning is done well in advance and politicians might still be able to have some projects undertaken within their political term.

Given the lack of independent ex-post evaluation of PPPs, an assessment of the value for money is required on a continuous basis. The Auditor General of South Africa (AGSA) currently audits the procurement process only and not an evaluation of value for money. Independent evaluation serves two purposes, first, to elevate the role of the PPPs as an infrastructure option and second, to timeously identify challenges with the regulatory framework and propose corrective actions. South Africa has not done ex-post evaluation of PPPs and this may be the reason for the limited changes to the PPP regulatory framework. Ex-post evaluation may be useful to National Treasury to propose reforms based on the findings of the review.

The Office of the Auditor General and the National Treasury do not undertake value for money audits for PPPs during and post-implementation of a PPP project,

depriving the government of an early warning mechanism. Accountability ensures transparency in PPP deals (National Audit Office (NAO) 2018:40; Rachwalski & Ross 2010:279) and assists in raising awareness of PPPs and how they can be improved in the future.

Awareness of PPPs may take various forms such as training and capacity building, which South Africa through the PPP Unit in the Government Technical Advisory Centre (GTAC) has been doing for a number of years. Public accountability concerning PPPs in Parliament or in a municipal council by an independent entity raises the awareness to politicians about PPPs. As discussed in this article, the adoption of PPPs as an infrastructure financing option is largely driven by political leadership with the assistance of the municipal officials.

## NOTE

- \* The article is partly based on a doctoral thesis under the supervision of Prof D J Fourie and Dr O S Madumo, titled: Mandiriza, T. 2021. *Assessment of factors influencing the adoption of public private partnerships in water infrastructure projects in selected municipalities*. Uncompleted doctoral thesis of Public Administration and Management. Pretoria: University of Pretoria.

## REFERENCES

- Beck, M., Toms, S., Mannion, R., Brown, S. and Greener, I. 2010. *The Role and Effectiveness of Public – Private Partnerships (NHS LIFT) in the Development of Enhanced Primary Care Premises and Services*. Report for the National Institute for Health Research Service Delivery and Organisation programme.
- Bender, P. and Gibson, S. 2010. *Case Study for the 10 years of the Mbombela (Nelspruit) Water and Sanitation Concession*. Johannesburg: World Bank. (Boyer & Newcomer 2015:130).
- Bishop, S. and Waring, J. 2016. Public–Private Partnerships in Health Care. In Ferlie, E., Montgomery, K. and Pedersen, A.R. (eds). *The Oxford Handbook of Health Care Management*. Oxford: Oxford University Press. pp 459–480.
- Boardman, A.E. and Vining, A.R. 2012. The political economy of public-private partnerships and analysis of their social value. *Annals of Public and Cooperative Economics*. 83(2):117–141.
- Boardman, A.E., Siemiatycki, M. and Vining, A.R. 2016. The theory and evidence concerning public-private partnerships in Canada and elsewhere. University of Calgary: *School of Public Policy Research Papers*. 9(12):1–31.
- Bovaird, T. 2004. Public-private partnerships from contested concepts to prevalent practice. *International Review of Administrative Sciences*. 70(2):200–215.
- Boyer, E.J. and Newcomer, K.E. 2015. Developing government expertise in strategic contracting for public–private partnerships. *Journal of Strategic Contracting and Negotiation*. 1(2):129–148.

- Boyer, E.J., Van Slyke, D.M. and Rogers, J.D. 2016. An empirical examination of public involvement in Public-Private Partnerships: Qualifying the benefits of public involvement in PPPs. *Journal of Public Administration Research and Theory*. 26(1):45–61.
- Burgess, S. and Ratto, M. 2003. The role of incentives in the public sector: issues and evidence. *Oxford Review of Economic Policy*. 19(2):285–300.
- Casady, C.B., Eriksson, K., Levitt, R.E. and Scott, W.R. 2020. (Re)defining public-private partnerships (PPPs) in the new public governance (NPG) paradigm: an institutional maturity perspective. *Public Management Review*. 22(2):161–183.
- Chowdhury, I.R. and Chowdhury, P.R. 2018. Public–Private Partnerships, Corruption and Inefficiency. In Ray, P., Sarkar, R. and Sen, A. (eds). *Economics, Management and Sustainability. Essays in Honour of Anup Sinha*. Kolkata: Springer. pp 53–64.
- Chung, D. and Hensher, D. 2015. Risk management in public-private partnerships. *Australian Accounting Review*. 72(25):13–27.
- Cobazan, B. and Hamlin, R.E. 2005. Corruption and ethical issues regarding public-private partnership. *Revista Transilvană de Stiinte Administrative*. 3(15):28–37.
- Coghill, K. and Woodward, D. 2005. Political issues of public-private partnerships. In Hodge, G.A. and Greve, C. (eds). *The challenge of public-private partnerships. learning from international experience*. Cheltenham: Edward Elgar. pp 81–94.4.
- Dudkin, G. and Vällilä, T. 2006. Transaction costs in public-private partnerships: a first look at the evidence. *Competition and regulation in network industries*. 1(2):307–330.
- Farlam, P. 2005. *Working Together Assessing Public–Private Partnerships in Africa. Nepad Policy Focus Series*. Pretoria: The South African Institute of International Affairs.
- Fernandez, S., Smith, C.R. and Wenger, J.B. 2006. Employment, Privatization, and Managerial Choice: Does Contracting Out Reduce Public Sector Employment? *Journal of Policy Analysis and Management*. 26(1):57–77.
- Fleta-Asín, J., Muñoz, F. and Rosell-Martínez, J. 2020. Public-private partnerships: determinants of the type of governance structure. *Public Management Review*, 22(10):1489–1514.
- Forrer, J., Kee, J.E., Newcomer, K.E. and Boyer, E. 2010. Public–private partnerships and the public accountability question. *Public Administration Review*. 70(3):475–484.
- Forrer, J.J., Kee, J.E. and Boyer, E. 2014. *Governing Cross-Sector Collaboration*. San Francisco, CA: Jossey-Bass.
- Garvin, M.J. 2010. Enabling development of the transportation public–private partnership market in the United States. *Journal of Construction Engineering and Management*. 136:402–411.
- Hall, D. 2015. *Why public-private partnerships don't work. The many advantages of the public alternative*. London: Public Services International Research Unit (PSIRU).
- Ham, V.H. and Koppenjan, J. 2002. Building public–private partnerships. Assessing and managing risks in port development. *Public Management Review*. 4(1):593–616.
- Hellowell, M. 2010. The UK's Private Finance Initiative: history, evaluation, prospects. In Hodge, G.A., Greve, C. and Boardman, A.E. (eds). *International Handbook on Public-Private Partnerships*. Cheltenham: Edward Elgar. pp 307–332.

- Herrera, V. and Post, A.E. 2014. Can Developing Countries Both Decentralize and Depoliticize Urban Water Services? Evaluating the Legacy of the 1990s Reform Wave. *World Development*. 64:621–641.
- Hodge, G.A. and Greve, C. 2010. Public-private partnerships: governance scheme or language game? *Australian Journal of Public Administration*. 69(1):8–22.
- Hodge, G.A., Greve, C. and Biygautane, M. 2018. Do PPP's work? What and how have we been learning so far? *Public Management Review*. 20(8):1105–1121.
- Klitgaard, R. 2012. Public-private collaboration and corruption. Paper presented at CBS-Sauder-Monash conference on public-private partnerships, Copenhagen Business School, 26–27 September 2012.
- Krugman, P. 2012. Opinion – Prisons, Privatization and Patronage. *New York Times*, 21 June [online] Available from: <https://www.nytimes.com/2012/06/22/opinion/krugman-prisons-privatization-patronage.html> (Accessed on 12 September 2020).
- Kumar, K.N. 2012. Water Privatisation: Causes and consequences. *Golden Research Thoughts*. 2(3):1–7.
- Lohmann, C. and Rotzel, P.G. 2014. Opportunistic behaviour in renegotiations between public-private partnerships and government institutions: Data on public-private partnerships of the German armed forces. *International Public Management Journal*. (17):387–410.
- Lonsdale, C. 2007. The Challenge of Public–Private Partnerships. *Local Government Studies*. 33(2):311–319.
- Madimutsa, C. and Pretorius, L.G. 2018. Public-private Partnerships and Industrial Relations in the Public Sector in Zambia. *African Journal of Public Affairs*. 10(4):310–325.
- McQuaid, R. and Scherrer, W. 2010. Changing reasons for public-private partnerships (PPPs). *Public Money and Management*. 30(1):27–34.
- Mörth, U. 2009. The market turn in EU governance —The emergence of public–private collaboration. *An International Journal of Policy, Administration, and Institutions*. 22(1):99–120.
- Moszoro, M. and Krzyzanowska, M. 2011. *Implementing public-private partnerships in municipalities. IESE Business School Working Paper WP-908*. Barcelona: University of Navarra.
- Mouraviev, N. and Kakabadse, N.K. 2015. Public–private partnership's procurement criteria. The case of managing stakeholders' value creation in Kazakhstan. *Public Management Review*. 17(6):769–790.
- National Audit Office. 2018. *PFI and PF2*. London: National Audit Office.
- Ngamlana, P.X. 2009. Improving public-private partnership deal flow for infrastructure delivery in South Africa: The role of National Treasury. Unpublished Masters Dissertation. Stellenbosch: University of Stellenbosch.
- Oosthuizen, M. and Thornhill, C. 2017. The grant system of financing the South African local government sphere: Can sustainable local government be promoted? *Local Economy*. 32(5):433–450.
- Opara, M. and Rouse, P. 2019. The perceived efficacy of public-private partnerships: A study from Canada. *Critical Perspectives on Accounting*. 58:77–99.

- Ortega, A., de los Angeles Baeza, M. and Vassallo, J.M. 2016. Contractual PPPs for transport infrastructure in Spain: lessons from the economic recession. *Transport Reviews*. 36(2):187–206.
- Palcic, D., Reeves, E., Flannery, D. and Geddes, R.R. 2019. Public-private partnership tendering periods: an international comparative analysis. *Journal of Economic Policy Reform*. DOI:10.1080/17487870.2019.1657016.
- Pusok, K. 2016. Public-Private Partnerships and Corruption in the Water and Sanitation Sectors in Developing Countries. *Political Research Quarterly*. 69(4):678–691.
- Reeves, E., Palcic, D., Flannery, D. and Geddes, R.R. 2017. The determinants of tendering periods for PPP procurement in the UK: an empirical analysis. *Applied Economics*. 49(11):1071–1082.
- Reeves, E., Palcic, D., Flannery, D. and Geddes, R.R. 2017. The determinants of tendering periods for PPP procurement in the UK: an empirical analysis. *Applied Economics*. 49(11):1071–1082.
- Reynaers, A.M. 2014. Public values in public private partnerships. *Public Administration Review*. 74(1):41–50.
- Roehrich, J.K.; Lewis, M.A. and George, G. 2014. Are public-private partnerships a healthy option? A systematic literature review. *Social Science and Medicine*. 113:100–119.
- Saussier, S., Staropoli, C. and Yvrande-Billon, A. 2009. Public–Private Agreements, Institutions and Competition: When Economic Theory Meets Facts. *Review of Industrial Organization*. 35:1–18.
- Schomaker, R.M. 2020. Conceptualizing Corruption in Public Private Partnerships. *Public Organization Review*. 20:807–820.
- Schomaker, R.M. 2020. Conceptualizing Corruption in Public Private Partnerships. *Public Organization Review*. 1–14.
- Scribner, M. 2011. *The limitations of public-private partnerships. Recent lessons from the surface transportation and real estate sectors*. Washington, DC: Competitive Enterprise Institute.
- Siemiatycki, M. 2015. Canadian pension fund investors in transport infrastructure: A case study. *Case Studies in Transport Policy*. 3(2):166–175.
- Skelcher, C. 2010. Governing partnerships. In Hodge, G.A., Greve, C. and Boardman, A.E. (eds). *International Handbook on Public-Private Partnerships*. Cheltenham: Edward Elgar. pp 292–30.
- Sturup, S. 2019. The Oxford Handbook of Mega Project Management. *Planning Theory & Practice*. 20(3):460–465.
- Thiemann, M. and Volberding, P. 2017. *Financing Infrastructure in developing countries through public private partnerships*. Germany: Bread for the World.
- Umar, A.A., Idrus, A., Zawawi, N.A.A.B. and Khamidi, M.F. 2012. Improving client internal capability to monitor public-private partnerships projects: a review. *American Journal of Engineering and Applied Sciences*. 5(4):301–309.
- Waring, J., Currie, G. and Bishop, S. 2013. A contingent approach to the organization and management of public–private partnerships: An empirical study of English health care. *Public Administration Review*. 73(2):313–326.
- Waring, J., Currie, G. and Bishop, S. 2013. A contingent approach to the organization and management of public–private partnerships: An empirical study of English health care. *Public Administration Review*. 73(2):313–326.



Warsen, R., Klijn, E.H. and Koppenjan, J. 2019. Mix and Match: How contractual and relational conditions are combined in successful public-private partnerships. *Journal of Public Administration Research and Theory*. 29(3):375–393.

Zamir, E. and Sulitzeanu-Kenan, R. 2017. Explaining Self-Interested Behaviour of Public-Spirited Policy Makers. *Public Administration Review*. 78(4):579–592.

## **AUTHORS' CONTACT DETAILS**

### **Mr Thulani Mandiriza**

University of Pretoria  
School of Public Management and  
Administration  
Private Bag X20  
Hatfield  
0028  
Email: [mandiriza@gmail.com](mailto:mandiriza@gmail.com)  
Cell: 079 816 7986

### **Dr O S Madumo**

University of Pretoria  
School of Public Management and  
Administration  
Private Bag X20  
Hatfield  
0028  
Email: [onkgopotse.madumo@up.ac.za](mailto:onkgopotse.madumo@up.ac.za)  
Cell: 073 871 7240

### **Prof D J Fourie**

University of Pretoria  
School of Public Management and  
Administration  
Private Bag X20  
Hatfield  
0028  
Email: [prof.djfourie@up.ac.za](mailto:prof.djfourie@up.ac.za)  
Cell: 083 258 5273