International Journal of Social Science Research and Review

http://ijssrr.com
editor@ijssrr.com
Volume 6, Issue 10
October, 2023
Pages: 34-48

Public Private Partnerships to Deal with Water Infrastructure Challenges in Zimbabwe

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http://dx.doi.org/10.47814/ijssrr.v6i10.1529

Abstract

This study aims to examine the challenges in urban water infrastructure in Zimbabwe. A qualitative research approach was used, and a triangulation of methods was applied in terms of the data collection and analysis to the recommendations of the study. The study seeks answers to the research question, such as: 'what are the challenges related to urban water management in Zimbabwe that demand the implementation of public private partnerships?' The information obtained from the respondents via interview during the gathering of primary data was used as empirical evidence. Secondary data were utilised to support the conclusions generated by the primary data. The findings revealed that urban councils have failed to re-engineer and revamp the water systems to meet increasing water demands. Also, local authorities lack the capacity required to revamp the water infrastructure for improved service delivery. Findings indicate that the adoption of PPPs in Zimbabwe's water sector can improve the urban water infrastructure.

Keywords: *Public Private Partnerships; Qualitative Research; Urban Water Infrastructure; Zimbabwe*

Introduction

The study aimed to describe the water infrastructure development challenges, and hence the adoption of PPP arrangements in Zimbabwe as a case study. Proper PPP implementation contributes to service delivery, infrastructural development, employment creation and economic development. Despite limited literature concerning PPPs, the preconditions for successful PPP implementation are not clearly understood in the Zimbabwean context, hence the need to unpack the concept's fundamental dynamics. This study aimed to proffer a contribution to the current body of knowledge by providing a critical appreciation of the anatomy of PPPs in urban water infrastructural development.

Throughout the history of humankind, water has played a crucial philosophical and religious role. To illustrate this importance, the Greek philosopher, mathematician and astronomer of the 6th century BCE, Thales of Miletus, regarded water as "the singular elemental building block of matter" (Zumdahl, 2021:1). Two centuries later, another Greek philosopher, Aristotle, considered water to be one of the four fundamental elements with air, fire and earth. For more than 2000 years, this belief that water is "a fundamental substance continued until scientific experiments in the 18th century demonstrated that the liquid is a compound consisting of two elements, namely oxygen and hydrogen" (Zumdahl, 2021:1).

Water can be utilised directly or indirectly because of its liquid form. Some of the direct purposes of water include drinking, bathing, and cooking. Indirect purposes include the use of water in the production of steel for automobiles and in the processing of wood to make paper. The common uses of water globally include "basic household chores, drinking, thermoelectricity or energy, agricultural, industrial and commercial purposes" (Centers for Disease Control and Prevention, 2021:1). Electricity generation, industry and agriculture consume the bulk of the world's water supply. Rodgers, Bhatia and Huber (1998:1) state that "there are values and costs that are also linked to water provision or supply. These costs can be direct and indirect and thus determine the value that can be affected by water quality and reliability". An analysis of the whole system demands an understanding of the costs and sustainability of such a commodity.

Zimbabwe needs water for agriculture, industry and domestic use and the current water infrastructure can no longer sustain the ever-growing populace. The existing water infrastructure is dilapidated and requires urgent rehabilitation and expansion; new infrastructure must also be built (Zinyama & Nhema, 2015:42). The lack of water infrastructure has caused an erratic supply of water in almost every city and all growth points in Zimbabwe, the most affected being major cities such as Greater Harare and Bulawayo, among others and this has threatened the ecosystems, industrial development, food security and human welfare and health (Greater Harare Water and Sanitation Report (GHWSR), 2014:1). Harare and Chitungwiza experienced serious waterborne diseases such as typhoid and cholera because of the erratic water supply that was compounded by the poor water quality. Harare's main water source was built in 1953 for a small population but now supplies Norton; Chitungwiza and Ruwa and the infrastructure cannot cope with the ever-growing populations (GHWSR, 2014:2). Several suburbs in Greater Harare have gone without water for years forcing residents to rely on shallow wells and a few boreholes provided by the United Nations International Children's Emergency Fund (UNICEF) [now officially known as United Nations Children's Fund] (Zinyama & Nhema, 2015:39). The deterioration of sewage and water services culminated in a severe outbreak of cholera in the 2008/09 rainy season when 100 000 cases of cholera were reported with approximately 4280 recorded deaths (Ministry of Health (MoH) Report, 2010:111).

The situation has not shown significant improvements, hence several strategic plans such as the Greater Harare Water and Sanitation Investment Plan of June 2014 and the Water Resources and Infrastructure Investment Conference (WRIIC) of 24-25 June 2015 attempted to come up with meaningful water infrastructure strategies but failed to produce the desired results. Water infrastructure projects were abandoned due to a lack of financial support from the government (Zimbabwe National Chambers of Commerce (ZNCC), 2009:8). For example, the Zambezi Water Project was proposed in 1912 but until now remains undeveloped. If implemented, the project would have supplied water to Zimbabwe's second-largest city, Bulawayo, which is facing a critical water shortage compounded by drought (Mutandwa & Zinyama, 2015:24). The Kunzvi Project, which should have supplied Greater Harare and its satellite towns and cities, namely Norton, Chitungwiza, Ruwa and Epworth, remains static with no funding from the government of Zimbabwe due to razor-thin budgets and a lack of fiscal space (WRIIC, 2015).

The humanitarian and economic crises in 2008, compounded by the cholera outbreaks, prompted donors and the Zimbabwean Government to engage in dialogue on the modalities of funding remedial and relief efforts. A Zimbabwe Multi-Donor Trust Fund (Zim-fund) was established and administered by the African Development Bank (AfDB) (2021:1). Part of the fund was for the urgent provision of water and the sanitation rehabilitation project, the main scope of which was the urgent rehabilitation of the water supply in six urban areas, namely Masvingo, Chegutu, Chitungwiza, Kwekwe and Mutare. The projects did not take off in a significant manner due to a lack of funding. The WRIIC of June 24-25, 2015 recommended that ten major water projects were urgently needed to improve the water situation in Zimbabwe and they include the Kunzwi Dam Development Project to build Kunzwi-Musami Dams to supply Harare, and the *Bulawayo-Matabeleland-Zambezi Water Project* for Bulawayo and parts of Matabeleland. The other projects include the construction of a dam to supply Chisumbanje, Muda and Nyatsime, a dam to supply Chitungwiza Town, the Kudu Dam for Gokwe Town and the Midlands Town water supply, the Nyatana Dam for hydroelectricity and Chivhu dam for a water supply. The estimated cost of the projects was USD2 billion (WRIIC, 2015). In a nutshell, Zimbabwe's water infrastructure is [still] in a sorry state; it urgently needs refurbishment/rehabilitation, new build, and maintenance. The government does not have the resources to finance such large capital projects and requires other stakeholders such as the private sector and donors to complement its efforts. In addition to the government policies and capacities, the Zimbabwe National Water Authority (ZINWA) was created to develop the water resources sector and manage the national water and other resources. Rivers were unregulated and there was inadequate attention accorded to the maintenance of critical water infrastructure with a high risk for public safety from the breach of dams if catchment plans were not implemented (AfDB, n.d.:1).

Capacities are needed for inspection programmes for major dams, the rehabilitation of water supply infrastructure, the expansion of water storage and supply systems, designing PPPs, rehabilitation of the existing water distribution network and the management of risks and uncertainties. Zimbabwe experienced one of the worst economic meltdowns in the world from the 1990s onwards (Zinyama & Nhema, 2015:42) and is still struggling economically. Inflation rose to unprecedented levels, which led to the demise of the Zimbabwean dollar in 2008 (ZNCC, 2009:15) and the country adopted a multi-currency regime in 2009 to resuscitate the economy. A critical shortage of clean water in most urban centres compounded by the emergence of waterborne infections such as typhoid and cholera in Harare and Chitungwiza in 2008 exposed the government's lack of finance to fund water projects (ZNCC, 2009:15) and the government sent an emergency call to the international world for urgent help in 2008. Zimbabwe, under tight fiscal pressure in the late 1990s, could not afford the magnitude of the funding requirements for water infrastructure development and refurbishment and this makes the case for PPPs imperative for the country (Zinyama & Nhema, 2015:43).

Research Methodology

A qualitative research approach was adopted to gain an in-depth understanding of urban infrastructure development and PPPs in Zimbabwe. Merriam (2009:13) defines a qualitative research design as a research approach concerned with gaining an in-depth understanding of the meanings constructed by people, for instance, how they make sense of their experiences and perceive their world, and also "seeks to understand phenomena in context-specific settings" (Hoepfl, 1997, in Vyas-Doorgapersad 2017:145; Chiware & Vyas-Doorgapersad, 2022:323). The purposive sampling technique was considered suitable for this study, as it is a technique used to select a sample based on its elements, knowledge of the population and the study's purpose (Babbie, 2002:270). Creswell (2007:35-41) holds that purposive sampling is a sampling technique whereby the researcher selects sites and individuals because they can purposefully inform an understanding of the central phenomenon or problem under investigation. The area of research is a knowledge-based enterprise where only knowledgeable people are

relevant to the study. The study purposively selected key informants (34 respondents) that comprised key officials from various sectors, such as: academics from Africa University (AU), the Mass Public Opinion Institute (MPOI), Midlands State University (MSU), University of Zimbabwe (UZ); businesses such as the Zimbabwe National Chamber of Commerce (ZNCC), the Confederation of Zimbabwe Industries (CZI); development agencies such as the International Monetary Fund (IMF), the World Bank (WB), United Nations Children's Fund (UNICEF); government ministries, for example, the Ministry of Finance and Economic Development (MoF), the Ministry of Lands, Agriculture, Water, Climate and Rural Settlement (MoL) and the Ministry of Local Government, Public Works and National Housing (MoLG); local authorities such as the Chitungwiza City Council (CCC), Harare City Council (HCC), Norton Town Council (NTC) and Ruwa Town Council (RTC); think tanks such as the African Capacity Building Foundation (ACBF), the Labour and Economic Development Research Institute of Zimbabwe (LADRIZ), the Zimbabwe Economic Planning and Research Unity (ZEPARU); and other stakeholders such as the Zimbabwe National Water Authority (ZINWA). Not all responses can be compiled in one article, hence responses relevant to the existing article form part of the study. The other responses will be explored in future publications. The primary researcher was able to gain a thorough grasp of the topics under investigation through the interviews. Information was also gathered through the researcher's observations. The first responder in each "category" was presented as R1, followed by the affiliation and the year the interview was conducted and so on. The participants were assigned codes to use when compiling replies, for example, R1 (UZ, 2021), R1 (CZI, 2021) and so on. All the data gathering techniques utilised in this study produced broadly similar and consistent results concerning Zimbabwe's institutional obstacles, corruption and governance issues and data saturation was achieved. The article only discusses one theme that is related to urban water infrastructure in Zimbabwe.

Results and Discussion

Challenges Related to Urban Water Management in Zimbabwe

Zimbabwe's urban water infrastructure became dilapidated in the past two decades and the urban water services deteriorated from their former high standards (African Ministers' Council on Water (AMCOW), 2011:22). Musemwa (2021:1) holds that although Zimbabwe attained independence and attempted to address its water disparity problems, the councils failed to maintain the systems resulting in dilapidated infrastructure (Musemwa, 2021:1). All the interviewees agreed that the current state of urban water infrastructure is dire and requires urgent attention. This was revealed in the response received from R4 (UZ, 2021), stating that "*Local authorities have failed to repair the ageing infrastructure, and this has led to a severe decline in services*". This sentiment was echoed by R2 (UZ, 2021) who said, *"The cities continue to experience non-revenue water reticulation systems and poor water distribution networks, all of which need repair or complete overhaul".* The think tank and development agency respondents supported the opinions expressed by the academics when stating that the *"Problem of raw sewage penetrating dams and rivers can affect clean water provision"* R1 (LADRIZ, 2021); "*A myriad of water treatment plans in urban centres in Zimbabwe are dysfunctional*" R1 (UNICEF, 2021) and "*Local authorities did not have the power to implement regulations fully and consistently. They also lacked chemicals for the water reticulation system* R1 (UZ, 2021). The significant deterioration of the urban water infrastructure, therefore, continues unabated (AMCOW, 2011:22). According to Makwara and Tavuyanago (2012:151), the urban areas in Zimbabwe are over-crowded amidst dilapidated water infrastructure that constantly fails. The water and sewer systems in the major urban centres are on the verge of collapse, thus putting the lives of millions of people at risk of consuming contaminated water, including that pumped from underground (Makwara & Tavuyanago, 2012:151)**.** One of the respondents, R3 (UZ, 2021), opined that the "*urban water infrastructure in Zimbabwe is deplorable and on average, 80% of the urban water infrastructure is in seriously bad shape. Harare alone is losing, on average, 60% of its treated water due to leaks*". It was apparent from the foregoing responses that Zimbabwe's urban

water and waste management systems were facing challenges that continued to manifest at the time of this research. This situation was compounded by the rapid urbanisation in the country from achieving independence in 1980 to the time of this study. Zimbabwe's urban water supply sector deteriorated in the past two decades and assumed crisis status owing to the difficult economic situation and other challenges faced by the country, including the cholera outbreak, as explained by R1 (ACBF, 2021). *2008*–2009 Zimbabwe *cholera epidemic resulted* in 98,585 reported cases and *caused more than 4,000* deaths (Nicholas, Sollom & Beyrer, 2017: 1). This was blamed on severe rationing and the poor quality of delivered water. The situation demanded urgent solutions. Harare, the nation's capital city, was unstable in terms of infrastructure, both literally and metaphorically (Atwood 2016:8). Nicknamed 'The Sunshine City', Harare has lost its lustre over the past years. The ambitions of the city fathers to obtain the status of 'World Class City' by 2025 were dismissed as unrealistic by many concerned by the city's decaying infrastructure and increasing failures at service delivery (Atwood 2016:8). R2 (HCC, 2021) claims that "*The state of the city's water infrastructure was completely broken and if no urgent plan was provided, the city was likely going to experience a cholera and typhoid disaster once again*".

According to the *Zimbabwe Independent* Reporter Ndebele (13 February 2015), Harare's world-class status is a pipe dream, as it does not meet the global standards of a modern city due to its failure to decentralise and provide quality services. It is important to note that this study was carried out in Harare and other cities and towns in its metropolitan area, namely Chitungwiza, Ruwa and Norton, which get their water from the capital city. Harare, as the capital city, should provide a shining example. This view was underscored by R1 (CCC, 2021), R1 (NTC, 2021) and R2 (RTC, 2021) who accentuated that Harare City Council provided water to Chitungwiza, Harare, Norton and Ruwa and was therefore the water authority for that area. According to the Water Act of Zimbabwe, a water authority has the responsibility to purify and supply water to residents and can charge a fee for the service (Water Act 1998, Chapter 20.24). According to Nhapi (2015:5), the acute shortage of water in Harare started around 2002 when efforts by the council to meet the demand for water were in vain due to the dilapidated infrastructure. Atwood (2016:8) believes that Harare's water infrastructure provided useful insights through which to view the challenges facing the physical infrastructure in Zimbabwe.

It is evident from the foregoing information that Zimbabwe's urban water infrastructure has faced several challenges**.** Zimbabwe, like any other country, needs water for domestic, industrial, agricultural, and recreational use and numerous other economic activities. A review of its urban water infrastructure depicted a plethora of challenges, particularly in the urban centres where populations are ballooning. The country's urban centres have experienced critical shortages of clean water for the past two decades. A combination of ageing infrastructure and equipment, coupled with a lack of maintenance, sewage pumps and a shortage of skilled technicians to manage repairs meant that stagnant sewerage pools because of burst pipes were a common sight in many urban centres in the country. Citizens were exposed to the imminent danger of waterborne diseases if no urgent action was taken by the authorities. This study established that the urban water infrastructure challenge in Zimbabwe had persisted for almost 2 decades without a solution. So many lives were lost between 2008 and 2009 due to cholera and typhoid in Zimbabwe's urban municipalities, the hardest hit being Chitungwiza and Harare. The urban water infrastructure was deteriorating by the day. This finding was unexpected because the GoZ was expected to act after the 2008-2009 cholera outbreak.

One of the respondents, R1 (WB, 2021), retorted, *"Why is this infrastructure like this? This infrastructure was built during the colonial era, and we are now 40 years into independence without massive rehabilitation or a complete overhaul of the system. The systems are full of broken rusty pipes and the population is expanding. The infrastructure was designed for 1 million people in Harare. Harare now has 4.5 million according to the 2012 census. Urban water infrastructure in Zimbabwe needs massive investment and the government does not have the capacity to revamp it to make sure that water gets to its citizens".* This is supported by the literature review which established that at the turn of the

millennium in 2000, the poor delivery of water and sanitation services was due to political and economic challenges (Mehta, Movik, Bolding, Derman & Manzungu, 2016:405). This was followed by an economic downturn caused by the deterioration of public investments in infrastructure as well as plummeting development assistance. This led to the creation of a gap to finance repair and maintenance of the ageing infrastructure as well as constraints to expanding the water and sanitation facilities to meet the corresponding growth in demand (AMCOW, 2011; Kapesa, 2021). R2 (HCC, 2021) mentioned that, in November 2013, leaks and non-revenue water accounted for 62% of lost water in Harare. All the participants in the study attested that the country's urban water infrastructure continued to face several challenges but differed in their opinions of the challenges. However, they all agreed that governance, lack of investment and lack of technical expertise were major challenges, highlighting that "*Harare has the capacity to treat enough water but much of the treated water is lost through leakages*" R1 (HCC, 2021), and "*Harare's main challenge was* [and still is] *non-payment of rates"* R2 (HCC, 2021). The challenges related to water governance and the institutional dimensions of urban water management are discussed in the ensuing section. Debates concerning urban water management centre on water governance and institutional issues, as these factors also influence the sector's technical performance. Rapid population increase, poor upkeep of wastewater treatment facilities, pricey technology and a weak institutional foundation are all blamed for these issues.

Water Governance

In 1980, the new government under Prime Minister Robert Gabriel Mugabe made several changes to local government structures to make the local government system more democratic, participative and inclusive. The main objectives of local authorities in the first two decades of independence were to address disparities in service delivery brought about by decades of segregation policy (Marumahoko & Nhede, 2021:50; also refer to The Free Library, 2023 at https://www.thefreelibrary.com/). In Africa, only Zimbabwe still uses the government or municipal system of water management and is not on par with most African countries that have adopted various forms of privatisation. The major disadvantage of the municipal system, as stated by the Japan International Cooperation Agency (JICA) (2018:38), is its vulnerability to political interference, which reduces transparency.

Utility providers must consequently answer to the people they serve rather than serving political interests. R1 (RTC, 2021) affirms that "*The city set the rate it would charge these other communities and it is typically more than the rate it charges its own citizens*". R1 (ZNCC, 2021) added that the "*Benefits of this project could have been attained had it not been for the government that gives ZINWA overall powers thereby frustrating water experts as they withdraw their co-operation from working with government bureaucrats"* R1 (HCC, 2021) added that "*Harare's monitoring and implementation of laws is inadequate because of economic constraints and a lack of political determination. Also, rubbish isn't collected regularly, fines are minimal due to hyperinflation and the city doesn't collect payment for water and other services from households".* This statement was supported by R2 (HCC, 2021) who said that, due to resident lobbying and government influence, the city has been unable to raise tariffs. Another response was that "*Zimbabwe lacks good governance, especially in the management of its urban water*" R1 (IMF, 2021). A further probe to R1 (IMF, 2021) elicited the view that "*The matrix in the water management was* [and is] *inadequate".* Urban local authorities in Zimbabwe, therefore, continued to face a myriad of challenges in delivering clean, reliable, safe drinking water to residents. The emergence of waterborne diseases that include typhoid, dysentery, cholera and diarrhoea is a cause for concern (Makwara & Tavuyanago, 2012:155). The outbreaks of diseases have been attributed to the disintegration of the entire water infrastructure from contaminated water reservoirs and disintegrating sewer systems to dilapidated piping networks and ageing infrastructure. The identified challenges are amplified by poor governance of the urban water sector and poor institutional frameworks.

Institutional Frameworks for Urban Water Management

Poor institutional frameworks are one of the challenges faced by the urban water sector and the various statements presented hereunder encapsulate the respondents' views. "*The Government of Zimbabwe does not want to practice good governance in line with democracy*" R1 (IMF, 2021). "*The governance of the water sector in Zimbabwe is shrouded in mystery. The state does not want to hand over control of its operations to local governments*" R1 (UZ, 2021). Zimbabwe's Ministry of Local Government and National Housing, which administers urban municipalities, restricts water management through its interference. R1 (ZNCC, 2021) said that "*There is a lack of separation amongst urban water management sectors in Zimbabwe*". The WB (1997:7-9), as cited in Vyas-Doorgapersad (2017:37), certifies that rules and restraints within the public sector include the constitutional separation of power and divisions of responsibility among levels. The respondents' views are supported by the constitutional provisions of the 2013 Zimbabwean Constitution. Section 5 of Zimbabwe's 2013 Constitution lists the national government, provincial and metropolitan councils and local authorities as the tiers of government**.** Sections 268 and 269 are read together with section 267 of the 2013 Constitution. According to Marumahoko and Nhede (2021:47), the Zimbabwean Constitution of 2013 gave the local government a constitutional status that it had previously lacked. Parliamentary Acts provided the basis for its legitimacy, although such Acts might be amended with a simple majority vote by the ruling party. Chapter 14 Section 246(1) of the Constitution grants the local government legal validity by arguing for democratic participation and the devolution of power and responsibilities to the lower tiers of government in Zimbabwe (GoZ 2013). Section 264 (2) informs the devolution of state responsibility, giving local governments to the people to increase their participation in state powers and decision-making, thereby promoting democratic, effective, transparent, accountable and coherent government in Zimbabwe as a whole; preserving and fostering Zimbabwe's peace, national unity and indivisibility; recognising the right of committees to manage their affairs and development, ensuring equitable sharing and incorporating local voices and resources as part of the devolution process. However, the devolution process is not being implemented in absolute terms due to a power struggle between the different tiers of government, lack of political will and inadequate resources, to name only a few reasons. Marumahoko and Nhede (2021:48) remarks that the national government has yet to enact legislation to clarify urban councils' parameters despite the 2013 Constitution. The Urban Councils Act (Chapter 29:15), which has been on the books for almost twenty years, continues to provide the rules for how urban municipal governments are governed legally. The Urban Council Act (Chapter 29:12), Public Health Act (Chapter 15:05) and Environmental Management Act (Chapter 20:27) together list 54 service delivery functions in their second schedules (Marumahoko & Nhede, 2021:48). It is important according to Vyas-Doorgapersad (2013:6) who stated that "a holistic approach should be taken by organisations dealing with water policies and programmes". On the contrary, the study concluded that the central government in Zimbabwe was still maintaining a grip on the local authorities and this grip continued to constrain the operations of urban municipalities, especially the provision of urban water infrastructure. Urban water authorities cannot borrow, form alliances or increase revenue from water to meet operational costs to make a marginal profit. This is contrary to the constitutional provisions that call for the devolution of powers to lower levels of government.

Based on the responses, the study recommends the use of PPPs for improvement.

Policy Recommendations

The Use of PPPs for Improved Water Infrastructure Development in Zimbabwe

A PPP is an effective and cost-efficient mechanism for the implementation of public policy in a range of policy agendas (Osborne, 2001:1). According to Mcquaid (2005:1), the benefits of a partnership

approach come specifically from recognising that any one local actor often does not have all the competencies or resources to deal with the inter-connected issues raised in numerous policy areas. Grimsey and Lewis (2004:6) argue that the central position is that the PPP is a strong incentive-compatible contracting arrangement. Implied is that PPPs are cost-effective compared to the traditional procurement arrangement because they bring engineering to the financing and designing solutions as well as managing revenue streams (Garvin, 2010:4). The current definition of a PPP it that it has three dynamics- each partner shares in the potential rewards and risks associated with the delivery of the project; the private sector is involved in the construction, facility design, operations, maintenance and financing and the long-term contractual agreement between the private and public sector delivers infrastructural development in which mutual benefits are attained (Garvin, 2010:4).

Globally, the modern development of water PPPs can be traced to the 1990s when several national governments embarked on ambitious reforms of their urban water supply and sanitation (WSS) services (Marin, 2009:1). Marin (2009:1) asserts that of 1990, more than 260 contracts in developing countries were awarded to private contractors for the management of water and sanitation. It should be noted that most of these projects were in the form of build, operate and transfer (BOT) models. Marin (2009:2) further explains that in 2000, more than 94 million people benefited from water provided by private operators. Furthermore, 160 million people had benefitted from private sector water service provision by the end of 2007, which marked an increase in water PPPs in both developed and developing countries. Some countries, for example, Malaysia, China, Russia, and Algeria partnered with private water operators on a large scale. Water infrastructure in countries such as the United Kingdom (UK), Chile and New Zealand has been provided under PPP arrangements since the 1980s. The rationale for this approach was the notion that private operators are more efficient than public operators because of their profit motive and the fact that their contracts have consistent and clear objectives, rather than the often conflicting and multiple goals ascribed to state-owned utilities (Harris, 2003:1172).

Numerous PPPs were developed in the 1990s in the water sector. Several Latin American countries, for example, Venezuela, Argentina, Colombia and Bolivia embarked on water reforms in the 1980s (Harris, 2003:1172). In Africa, records show that Cote d'Ivoire was one of the countries that engaged a private operator known as Societe d' a Management Urban et Rural (SAUR) in 1960 that operated a national but private water utility known as Societe de Distribution de Cote d'Ivoire (SODECI). African countries initiated their water PPPs at different times (Zimyama & Mutadwa, 2015).

The PPP arrangement best suits the Zimbabwean context to finance water infrastructural development. Dube and Chigumira (2011:5) argue that Zimbabwe lacks the required expertise and financial resources that can be supplied by a private sector partner while the government simply provides the legal and institutional framework to boost investor confidence. Under the Short-term emergency recovery programme (STERP) (2009:119), PPPs were recommended as viable tools to finance infrastructure development in rail services, power generation and airway, highway and dam construction. Several blueprint documents in Zimbabwe indicate gaps in their strategic development clusters and PPPs can be a solution to meet such blueprint targets. The Zimbabwe Socio-Economic Transformation (ZIMASSET) blueprint has indicated four strategic development clusters that present opportunities for PPPs. These are Infrastructure, Food Security and Nutrition, Social Services and Poverty Eradication and Utilities (ZIMASSET), 2013). Zimbabwe has a large infrastructure gap that should be seen as presenting business opportunities. [For example], PPPs can play a significant role in parastatals such as the United Passenger Company, NetOne, TelOne, the National Railways of Zimbabwe, Zimpost, Air Zimbabwe, National Oil Company of Zimbabwe, and Grain Marketing Board among others. These parastatals are currently facing serious operational challenges (Zimbabwe Economic Policy Analysis Research Unit (ZEPARU), 2016:51). Zimbabwe presents opportunities for PPPs through the country's skills exposure and access to improved technological advancement. It is common knowledge that the country has a technically competent and highly skilled workforce and has made tremendous improvements in

introducing a one-stop investment shop that streamlines bureaucratic bottlenecks and has advanced the country's ease of doing business (Chikwawawa & Bvirindi, 2019:3). In terms of business competitiveness, the country has partially dollarized the economy. This presents an investment destination as the use of the reserve currency provides stability due to its acceptance (Halimani, Dzapasi & Mavaza, 2020:7). Several PPP projects were implemented in Zimbabwe, namely the New Limpopo Bridge in 1993 and the Beitbridge Bulawayo Railway, both through a BOT model. Other PPP projects include the Newlands Bypass in 2007 and the latest was the "rehabilitation of roads and tolling projects on the major highways in Zimbabwe by Infralink" (ZEPARU, 2016:51). The company, Infralink, secured funding through the Development Bank of South Africa (ZEPARU, 2011:4). Although several PPP projects were implemented in Zimbabwe, this discussion focuses on completed projects such as the Newlands Bypass (NLB), the New Limpopo Bridge (NLB) and the Beitbridge Bulawayo Railway (BBR). Some of the PPP projects are still underway and their impacts are yet to be assessed. In 2007, the Newlands Bypass was completed under the BOT model. It consists of a four-lane highway that bypasses Newlands Shopping Centre and re-joins Enterprise Road at the intersection of Glenara Road (Zimbabwe Development Agency (ZIDA), 2021). A PPP can deliver infrastructure projects even under extreme economic conditions as long as the government is committed. The cabinet is an important institution with a deterministic role in the conclusion of PPP agreements in Zimbabwe (ZEPARU, 2016:49). The abovementioned project proved the inefficiency of government bureaucratic processes. Financial transparency can be assured through effective strategies such as trust funds administered by both partners to create checks and balances. The GoZ should also review its approval times (Halimani, Dzapasi & Mavaza, 2020). The project highlighted the government's inability to make timeous, clear decisions with the project's approval taking 13 years. Several of the projects are discussed briefly hereunder.

The New Limpopo Bridge (NLB) project was awarded to a private player in 1993 by the Governments of Zimbabwe and South Africa. This involved the building and financing of the toll bridge over the Limpopo River (Dube and Chigumira, 2018; Mutazu, 2020). According to Dube and Chigumira (2018:6), this was the first BOT project of that nature in Africa. The project was carried out by the New Limpopo Bridge (Pvt) Ltd, a private company incorporated and registered in Zimbabwe. The company is a subsidiary of NLP1 Ltd, an investment holding company whose main investment focus is infrastructure-related projects on the African continent. The NLB was completed in a record time of thirteen months and officially commissioned by the Presidents of Zimbabwe and South Africa (Dube and Chigumira, 2018; Chikwawawa & Bvirindi, 2019). The Beitbridge Bulawayo Railway (BBR*)* involved the construction of a 350 km railway line between the South African border and Bulawayo and was also built in a record time of 18 months. The BBR created a seamless rail service from South African ports to Bulawayo and other destinations along the line (Dube and Chigumira, 2018; Chikwawawa & Bvirindi, 2019) and shortened the travel time between the South African border and Bulawayo from days to only 9 hours (Dube and Chigumira, 2018; ZEPARU, 2011:9). It should be mentioned that the GoZ put in place incentives incorporated under a BOOT PPP model in which investors are provided with incentives for entering into PPP schemes that include a five-year tax holding and a reduced tax rate for the subsequent five years (Dube & Chigumira, 2018; ZEPARU, 2011:5). Zimbabwe has been attempting to enact PPP policies since 2004 through documents such as the 2004 PPP guidelines and frameworks such as ZIMASSET, STERP, TSP, Joint Ventures Act and ZIDA Act 2020. The country will only realise an influx of foreign direct investment to develop its infrastructure by embracing PPPs. Studies of Zimbabwe's PPP experiences revealed that a lack of proper PPP guidelines results in operators charging exorbitant prices and a lack of parameters for the expected quality of the infrastructure servicing. Despite the PPP law being enacted in 2016 and the ZIDA Act in 2020, there is still a low uptake of PPPs in urban water infrastructure development. Although PPP initiatives were implemented in Zimbabwe, the initiatives focused on the transport sector. There is thus a lack of data concerning the possibilities for using PPP models for urban water infrastructural development and the implementation gap of PPPs in Zimbabwe raises fundamental questions about whether or not PPPs in urban water infrastructural development will be effectively implemented to achieve the desired results.

Conclusion

After gaining independence in 1980, the country's urban areas experienced rapid population growth that water delivery could not match because of inadequate water infrastructure, poor water governance, a weak institutional foundation and corruption. This began with the essential renovation of sewage treatment systems being disregarded. The present institutional structure is still not absolutely feasible due to the lack of governance, administration and monitoring of water systems. These issues cannot be resolved in the near future as they were brought on by years of poor governance that resulted in the neglect of the infrastructure and the need to maintain the existing systems. The government and municipal authorities are unable to resolve the present urban water problem immediately in the absence of outside assistance (including business partnerships to invest in water infrastructure).

A common thread cutting across the findings was that the urban water infrastructure in Zimbabwe was dilapidated. The interviewed respondents generally agreed that the water infrastructure, which was built during the colonial period, has outlived its usefulness. The findings revealed that urban councils have failed to re-engineer and revamp the water systems to meet increasing water demands. Consequently, non-revenue water reticulation and poor water distribution characterise most urban councils. Water challenges in Harare reached a peak in 2008 when the city experienced cholera and typhoid outbreaks which killed more than 4000 people. The respondents attributed the deplorable state of the water infrastructure to rapid urbanisation, local government capacity constraints and political interference in council affairs. In addition, Harare City Council is encumbered with a high demand for water as it supplies water to Chitungwiza, Norton and Ruwa local authorities. This has severely constrained the Harare City Council's water-generating capacity.

It is also clear that the water governance system used in Zimbabwe also contributed to the water challenges. The study revealed that Zimbabwe is among the few countries in Africa that rely on a government water management system. The government-managed water system, as highlighted in the study is subjected to political interference and manipulation. The study suggested that Zimbabwe consider a private utility-based water management system. The respondents argued that water utilities must be accountable to the people rather than politicians. The need to clarify the working relationship between ZINWA and the local authorities was explained. It was argued that the transfer of the water function from local authorities to ZINWA and back to local authorities exacerbated the water crisis and ZINWA and the local authorities' functions must be defined unambiguously. The study also highlighted the central government's reluctance to devolve powers to local authorities as another stumbling block in water governance. There was a general concern among the respondents that the central government is undermining water service delivery through the invisible hand of the Minister of Local Government.

The study also recommends that as the water sector involves several actors, which include ZINWA, local authorities and government ministries, the central government ought to streamline the working relations among these actors. The central government must restructure the institutional frameworks to avoid unnecessary complications and delays associated with the involvement of too many actors in the implementation of PPPs. There is therefore a need for the central government to thoroughly review the water sector's institutional framework. Properly designated duties and responsibilities must be assigned to ZINWA, and the urban local authorities and the central government must devolve governmental powers to local authorities. Devolution provides local urban authorities with the decision space to negotiate and implement PPPs. Local urban authorities must be empowered to govern using their initiatives as outlined in the Constitution of Zimbabwe (CoZ) (2013). Central government interference creates conduits for political meddling and corruption in the operationalisation of PPPs and must be legally limited. Implementation must be the sole responsibility of urban local authorities and ZINWA, depending on the assigned roles and responsibilities.

There is an absence of readiness to embrace PPP in Zimbabwe. Some of the reasons are lack of technical skills and expertise; lack of coordination among the government departments responsible for water infrastructure; accountability fragility; to state a few. These issues will be explored in future studies.

Note

This article is based on an unpublished PhD thesis titled Mutandwa, H. 2023 - Urban water infrastructure development in Zimbabwe: The role of Public Private Partnerships at UJ under the supervision of Prof S Vyas-Doorgapersad. Unpublished Thesis. Johannesburg: University of Johannesburg.

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