Journal of Local Government Research and Innovation

ISSN: (Online) 2788-919X, (Print) 2709-7412

Page 1 of 7

Comparative analysis of the public–private partnerships framework: Case for South Africa and Brazil



Authors:

Thulani Mandiriza¹ David J. Fourie¹

Affiliations:

¹School of Public Management and Administration, Faculty of Economic and Management Sciences, University of Pretoria, Pretoria, South Africa

Corresponding author: David Fourie, prof.djfourie@up.ac.za

Dates: Received: 06 July 2022 Accepted: 29 Sept. 2022

Published: 15 Dec. 2022 How to cite this article:

Mandiriza, T. & Fourie, D.J., 2022, 'Comparative analysis of the public–private partnerships framework: Case for South Africa and Brazil', *Journal of Local Government Research and Innovation* 3(0), a93. https://doi.org/10.4102/ jolgri.v3i0.93

Copyright:

© 2022. The Authors. Licensee: AOSIS. This work is licensed under the Creative Commons Attribution License.

Read online:



Scan this QR code with your smart phone or mobile device to read online. **Background:** This article provides a comparative analysis of South Africa and Brazil's municipal public–private partnerships (PPPs) framework with the objective of obtaining lessons for South Africa. Between 1995 and 2019, Brazil had 96 municipal water PPP projects in contrast to South Africa, which had only six municipal water PPP projects.

Aim: The article through comparative analysis seeks to gain insights from the Brazilian PPP framework and then to deduce some lessons for South Africa. Brazil was chosen because it has similar developmental characteristics to South Africa.

Method: This article relied heavily on secondary qualitative data to analyse both South Africa and Brazil's municipal PPP frameworks.

Results: South Africa needs to frequently review its PPP regulatory environment to determine its effectiveness and fit for purpose; create a framework for fast-tracking smaller PPP projects; and put in place mandatory ex-post evaluation of PPP.

Conclusion: South Africa's policymakers must redesign the municipal PPP framework and approval process to be able to respond to changing environments and address the underlying reasons for the low uptake of municipal infrastructure projects.

Contribution: The article provides valuable lessons to policy makers especially in Africa, on how to design an effective regulatory framework to facilitate the speedy adoption of municipal PPPs in the water sector.

Keywords: South Africa; Brazil; municipal public–private partnerships; municipal water infrastructure projects; comparative analysis.

Introduction

South Africa experiences water scarcity and is ranked number 30 on the list of driest countries worldwide, with insufficient water to adequately meet water needs for its citizens (GreenCape 2017:14). The Department of Water and Sanitation (DWS) in 2018 estimated that over the subsequent 10-year period, an investment of approximately ZAR840 billion would be required in new water infrastructure, maintenance and upgrading of existing infrastructure at both the national and local government levels. The funding gap was estimated to be ZAR333 bn over the 10-year period (DWS 2018:47–48).

Water service authorities (municipalities) face several challenges in the delivery of their mandate. Some of the challenges faced by these municipalities include: (1) limited investment in infrastructure, resulting in rapidly ageing infrastructure; (2) governance failures and institutional capacity constraints; and (3) constrained municipal finances because of poor tariff-setting and billing practices (National Business Initiative 2019:8). At least 33% of the South African municipalities that are designated as water service authorities are regarded as dysfunctional, and more than 50% have only limited qualified technical staff to undertake the water services function effectively (DWS 2018:21). The inability of the municipalities to consistently provide water to ratepayers because of infrastructure challenges, poor financial position and institutional and governance failures result in those municipalities being regarded as dysfunctional.

Some of the challenges cited above may be addressed by partnering with the private sector. Public–private partnerships (PPPs) integrate the private sector in service delivery beyond arm's-length transactions, in which both public and private entities have mutual interest for the success of the partnership (Boyer, Van Slyke & Rogers 2016:7). The success of PPPs in pioneering countries has led governments across the world, including South Africa, to explore PPPs as an alternative funding instrument for infrastructure projects. New public management (NPM), on

which PPPs are anchored, predicts several benefits to the public sector from the use of PPPs. Some of the benefits include avoidance of upfront project costs by government, pursuit of efficiency by the private partner through innovative financing and service delivery mechanisms. Public–private partnerships 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 2019:78).

The successful adoption of PPPs by the private sector is dependent on the existence of an enabling environment and a well-defined PPP framework. The question that this article seeks to answer is: 'Why are countries with similar socioeconomic conditions attracting different levels of private sector investment in municipal water infrastructure projects? Does the municipal PPP frameworks play a role?'

To be able to answer the question above, this article uses Brazil as a benchmark given its success in attracting private sector investment in the municipal water sector, which South African municipalities are struggling to achieve.

Methodology

Qualitative content analysis or documentary review is used in this article to analyse text data from various secondary sources (Hsieh & Shannon 2005:1278). The basis for documentary review is to inform comparative and benchmarking analysis. Benchmarking is defined as a process of improvement established from learning from other organisations or environments (Hong et al. 2012:444). The underlying principle of benchmarking is identifying products, services or processes with high standards and then adjusting one's own processes to reach the observed high standards elsewhere. Benchmarking is useful in identifying new ideas to improve processes and procedures or policies. The observed standards elsewhere are commonly referred to as best practice (Milosevic et al. 2013:365). Best-practice benchmarking is founded on two assumptions: firstly, top performers have superior practices, and secondly, the superior practices are easily distinguishable from other practices and imitated to improve one's own results (Hachez et al. 2017:11). The benchmarking concept can be used in several settings, including national policy benchmarking, such as PPP frameworks across countries. The process of undertaking policy benchmarking is common in government and acts as a tool of policymaking and policy monitoring (Hachez et al. 2017:10). An example of policy benchmarking in government could be comparing how the PPP policy in one country compares to another country.

There are conceptual similarities between benchmarking theory and comparative public administration (CPA) in that both seek to compare, find what works and possibly implement the better solution. Jreisat (2010:612) defines CPA as 'a method of learning and discovery that utilises comparative analysis to advance administrative knowledge'. Comparative analysis may be undertaken in various aspects of public administration, such as administrative structures, administration reforms, administrative tools and strategies, public policy, public functions, organisational dynamics, management practices, national development initiatives and cultural standards, among others, with the objective of advancing public administration knowledge and service delivery. The ultimate focus for CPA is to enhance governance by learning from others and promote effectiveness in the provision of government services (Khan 2016:2).

According to the World Bank's Private Participation in Infrastructure (PPI) Database, between 1995 and 2019, Brazil had 96 municipal water PPP projects in contrast to South Africa, which had only 6 municipal water PPP projects (World Bank 2020:1).

Framework to support private sector participation

Public–private partnerships flourish where there is an enabling environment or conditions conducive to attract private sector investment. Biygautane, Hodge and Gerber (2018:332) identify the fundamental success factors guiding private sector participation in PPPs, which include:

- Good governance and rule of law the focus is on the separation of powers between the judiciary and government (including political influence); and government, private businesses and individuals, all equal before the law.
- Legal and regulatory institutions the focus is on strong regulatory and accountability institutions that are independent of political influence, institutions that ensure transparency and prevent corruption in commercial deals.
- Competition-driven market economies the focus is on competitive business environments, a vibrant and financially capable market economy and the existence of competitive bids.
- Professional capacity in both the private and public sectors the focus is on establishing PPP units that facilitate partnerships, a highly capable private sector to deliver complex projects and improving the technical capacity within the public sector to prepare PPP-related documents.

With the broad parameters for evaluating PPP frameworks established, the next step is to understand Brazil's PPP framework, which has yielded 96 municipal water PPP projects compared to only 6 in South Africa.

Brazil

The Brazil's Federal Constitution of 1988 (hereafter referred to as the 1988 Constitution) created separate legislative and administrative arms to ensure accountability and foster the doctrine of separation of powers. From the administrative arm, power is shared among the federal government, states and municipal governments (Sampaio & Sampaio 2020:2). Brazil has a cooperative government model which confers some powers to the 26 states, one federal district (Brasilia), the federal government and 5570 municipalities. The federal government is responsible for

policy development, issuing directives and guidelines to be followed by states and municipalities (Ribeiro & Fabre 2019:5; Sampaio & Sampaio 2020:2).

Local government in Brazil is autonomous and has the power to enact its own laws (guided by the Federal Constitution). Like South Africa, local government in Brazil also receives funds from the respective states and federal government to support service delivery initiatives and programmes (Ribeiro & Fabre 2019:5).

Evolution of public–private partnerships and the legal framework in Brazil

The genesis of PPPs in Brazil dates to the 19th century with initial projects in the railway industry. During this period, PPPs were not formalised (Arrobas & Enei 2009:21). Publicprivate partnerships were later formalised when Brazil adopted its 1988 Constitution, which led to the development of a comprehensive PPP framework composed of two main laws: the Concessions Law of 1995 (No. 8987/95) and the PPP Law of 2004 (No. 11079/04) (eNeto, Cruz & Sarmento 2019:557; The Economist Intelligence Unit [EIU] 2019:29). The Concessions Law allows private companies to build and operate infrastructure assets which will later be owned by government after the lapsing of the contracted period. The PPP Law of 2004 formally establishes PPPs (Barral & Haas 2007:960; EIU 2019:29). Public entities are required to motivate why PPP should be considered as the most viable funding option through value-for-money assessment and cost-benefit analysis (Pereira 2014:35). In 2012, Federal Law No. 12766/12 was passed as an amendment to the PPP Law of 2004, which introduced incentives to the private sector by legalising the payment of services by the public sector at the project development phase as opposed to making payments only when the project is completed (eNeto et al. 2019:557). The PPP Act was amended in 2014 to provide clarity to all levels of government on the allocation of up to 5% of its net fiscal revenue in PPP projects (BRICS South Africa 2018:13).

Taking guidance from the principles outlined in the Federal Laws, the states and municipal governments may promulgate their respective PPP regulations (eNeto et al. 2019:557). Between 2005 and 2014, 20 state capitals passed PPP-specific legislation (Radar PPP 2015:30). PPP projects by different levels of government are aligned to the constitutional powers assigned to each level of government. For instance, the federal government is responsible for PPP projects in several sectors such as energy and interstate transport sectors. Equally, the various states and municipal governments are responsible for water, sanitation and localised road projects and would enter into PPPs for the specific services (EIU 2019:29). Brazil has restrictions on the participation of private investors from foreign countries in PPPs (Marques 2016:464).

For the private sector to invest in water infrastructure, PPP reforms are not the only important consideration but also reforms in the water sector more generally. The reforms and institutional sector in the water sector relevant to PPPs are discussed below.

Institutional set-up and reforms supporting water public-private partnerships in Brazil

Prior to the 1960s, water provision in Brazil was deficient and of poor quality, and each water authority had a different business and water management model. The water value chain was clearly fragmented, with no standardised norms and procedures (De Oliveira 2008:1). In 1964, the military government prioritised water and sanitation and created the National Housing Bank (BNH), and this was followed by the establishment in 1971 of the National Sanitation Plan (PLANASA). The plan championed the formation of state water and sanitation companies (CESBs) and persuaded municipalities to enter into long-term concessions with some private companies (De Oliveira 2008:1).

Brazil instituted further reforms in the water sector, launching new water policies and establishing new institutions at the federal, state and local government levels to improve efficiency in the sector. The 1988 Constitution empowered states to manage their own water resources, and many states enacted own laws. In 1991, São Paulo was among the first to enact water-related laws, followed by 11 states between 1991 and 1997. The *National Water Law (No. 9433 of 1997)* came into force in 1997, introducing the National Water Resources Policy (NWRP) and the National Water Resources Management System to manage and implement the new policy direction (Victor, Almeida & Wong 2015:11). These attributes of the reform agenda positively contributed to some extent in making the water sector attractive to private sector investment.

In addition to the reforms, there are several institutions that support the water sector in Brazil, such as the National Water Agency (ANA), which enforces the water policy and consolidates institutional reforms in the water sector into a single and coherent entity (Victor et al. 2015:12). The Brazilian government, since 2007, increased funding into the water and sanitation sector using various funds such as the infrastructure Programme for Growth Acceleration (PAC) and subsidised long-term financing by the Brazilian Development Bank (BNDES), as well as private sector participation (World Bank 2017:4).

The Brazilian government, through *Law No. 13,334 of 2016*, launched the Investment Partnerships Programme (IPP), creating the IPP Council and the IPP Secretariat. Since its launch, the quantity and quality of PPPs improved both in terms of documentation and implementation (Prats 2019:14). Taking guidance from the Federal Laws, the state and municipal governments developed their own PPP regulations to promote and revive private sector investment.

Public–private partnerships in the water sector in Brazil achieved growth when the sector developed a comprehensive PPP framework composed of two main Federal Laws: the *Concessions Law* and the *PPP Law* discussed above. The reforms in the water sector such as the establishment of the National Sanitation Plan, which set out the investment

requirements for the water sector; developing water sector policies and guidelines for tariff determination; and the creation of new institutions established at the federal, state and local government levels to improve efficiency in the water sector contributed to this growth (De Oliveira, 2008:1).

Competition in the tender or bidding market

New public management champions the promotion of competition and in the case of PPPs, the avenue for creating competition is in the bidding process where private sector investors compete to provide public services. Federal Law No. 8.666 of 1993 prescribes general rules on procurement and administrative contracts; that is, it directs how bidding will be conducted. Public entities are required to provide a motivation as to why PPP should be considered as a viable funding option; in other words, a business case for PPPs is mandatory. Other factors to be included in the document are value-for-money considerations, options evaluation and cost-benefit analysis (Pereira 2014:35). Despite the clarity provided in the procurement laws, Brazil has put restrictions on the participation of private investors from foreign countries in PPPs (Marques 2016:464). Accordingly, Brazil has not fully embraced the benefits that accrue from opening tenders for PPP to foreign companies. Restricting tenders to only Brazilian companies limits innovation and use of alternative technology. These restrictions limit the extent of competition and may increase costs to government arising from poor competition outcomes (Marques 2016:464).

In summary, to drive its PPP framework, Brazil put in place the following:

- Credible governance mechanisms which provide for a clear separation of powers among key role players such as the judiciary, government and private sectors. This affirms equality before the law for all (everyone).
- Legal and regulatory institutions which support PPPs to ensure transparency and minimise corruption in commercial deals.
- Promote competition through competitive bids to ensure the private sector participates in PPP projects. However, restrictions on foreign participation limit effective competition.
- Professional capacity in both the private and public sectors was improved through establishing PPP units, which are decentralised to all levels of government.

South Africa

South Africa's first democratic government in 1994 sought alternative service delivery mechanisms to address infrastructure backlogs, and one of the options considered was PPPs (Fourie 2008:559). The Constitution, which was adopted in 1996, does not make any specific reference to PPPs but alludes to general procurement guidelines, general rules and principles of fairness, equity, transparency, competitiveness and cost-effectiveness. Procurement under PPPs should exhibit these principles to ensure that the municipality derives value-for-money through a competitive bidding process. In 1997, South Africa's government set up a multidisciplinary team to explore whether PPPs could be a viable option to address infrastructure backlogs and new infrastructure development (Arimoro 2018:216). This process led to the pioneering PPP projects which occurred between 1997 and 2000 (National Treasury 2019:152). In 1999, Parliament enacted the Public Finance Management Act, 1999 (Act 1 of 1999) (PFMA), which provided impetus for PPPs by detailing the procurement process to be followed. In mid-2000, the National Treasury set up a PPP unit initially staffed with five experts from government, the private sector and international development agencies (Arimoro 2018:216). In April 2001, the National Treasury issued regulations in terms of the PFMA called 'Treasury Regulations for National Departments, Constitutional Institutions and Public Entities'. Public-private partnerships at the local government sphere were formally recognised as a procurement option by the enactment of the MFMA in 2003. Table 1 summarises some of the major policy and legislative developments that led to PPPs.

South Africa's public policymakers played an active role in driving PPPs from the late Nineties to mid-2005. Since 2006, no significant improvements to the PPP policy environment were made, despite the fact that no new municipal water PPP projects came on board since the last concession agreement in 1999 (Walwyn & Nkolele 2018:4).

Institutional set-up and reforms supporting water public–private partnerships in South Africa

Water policy in South Africa evolved over time with the objective of reversing the discriminatory practices of colonial rule. The transition from colonial regime to democracy in

 TABLE 1: Legislative developments leading to the formal public-private partnership framework in SA.

Year	Policy or legislative developments
Pre-1994	No legislative guidance on the procurement of infrastructure using PPPs.
1996	Adoption of the first democratic Constitution, which provides set-out principles of fairness, equity, transparency, competitive and cost-effectiveness in procurement.
1997	Cabinet set up a multidisciplinary team to develop a national policy on PPPs.
1998	First PPP launched (SANRAL N4 East Toll Road) in February 1998.
1999	Enactment of the <i>Public Finance Management Act, 1999</i> (Act 1 of 1999) in March 1999. Three more PPPs concluded in 1999.
2000	The National Treasury set up a PPP Unit in the Budget Office to promote the implementation of PPPs.
2000	The Municipal Systems Act (MSA) was passed regulating PPPs.
2001	Regulation 16 outlines the life cycle of PPP projects and the approval process for all PPP projects for national and provincial departments.
2003	Enactment of the <i>Municipal Finance Management Act</i> (MFMA) to guide financial management at the local government level.
2004	The National Treasury released the PPP Manual and Standardised PPP Provisions in terms of the PFMA (national and provincial government and their public entities).
2005	Ministers of Finance and Cooperative Governance and Traditional Affairs jointly issued the Municipal Service Delivery and PPP Guidelines of 2005. The guidelines provide detailed procedures to municipalities and municipal entities considering entering into PPPs.
2005	The National Treasury issued Regulation 16A to support the establishment of supply chain management capacity.
2006–2020	No significant policy change regarding PPPs over this period except that the National Treasury in 2019 identified the need to review the PPP framework.

PPPs, public-private partnerships; PFMA, *Public Finance Management Act*; SANRAL, South African National Roads Agency SOC Ltd.

1994 forced the democratic government to revisit institutional arrangements in the water sector. Revision of repressive laws was a priority of the new government, and the water sector was no exception (Bayliss 2016:5). Postcolonial water policies were anchored on addressing water access imbalances, which tied access to water with land ownership as specified in the Water Act, 1956 (Act 54 of 1956) (Kapfudzaruwa & Sowman 2009:683). Institutions were set up to support the reform process, but this article will focus only on those reforms which support PPPs. Apart from the Municipal PPP Regulations, South Africa does not have specific regulations governing PPPs in the water sector. However, the Municipal PPP Regulations have 'feasibility study toolkits' for water and sanitation, solid waste management and commercial use of municipal property by the private sector. The water and sanitation toolkit is designed to help municipalities undertake feasibility assessment for potential partnering with non-state actors such as civil society and the private sector.

There are limited reforms in the water sector that support PPPs, except a few policy directives, some of which were not implemented (Ntola & Le Roy 2019). For instance, the DWS had identified the necessity to create an independent water regulator since 2012. The justification for this policy position was to ensure cost recovery price setting, provide certainty for private investors, guarantee returns for private capital and reduce political influence (Ntola & Le Roy 2019). The DWS is both a policymaker and regulator across the value chain, and this dual role creates perverse incentives and conflict of interest and is prone to political interference, since both functions are subject to the same Minister. This scenario disincentivises private investment given the perceptions of heightened political interference (Ntola & Le Roy 2019). Unfortunately, the policy intent by the DWS has not led to the establishment of the independent water regulator for the past decade.

Institutions to support public–private partnerships in South Africa

South Africa has several institutions which support the rollout of PPPs; for instance, the National Treasury's PPP Unit has specific responsibilities which include developing and promoting a framework for PPP and preparing associated guidelines (BRICS South Africa 2018:13). The Development Bank of Southern Africa (DBSA) originates and finances infrastructure projects across sectors in South Africa and recently started expanding further into the African continent (DBSA 2019:2). Other institutions that support PPPs in one form of the other include:

- The Gauteng Infrastructure Financing Agency (GIFA), which provides 'specialist financing solutions for key infrastructure projects in Gauteng Province' (GIFA 2019:10).
- Infrastructure Fund The South African government provided seed money amounting to R100 bn to create a project pipeline of infrastructure projects. The seed funding will be blended with private sector funding to create a pool of financial resources to revive infrastructure projects in various sectors, including water (The Presidency 2021:11).

Competition in the tender or bidding market

Procurement of goods and services in South Africa's public service is guided by the principles of fairness, equity and competition. Procurement under PPPs should exhibit these principles to ensure that the municipality derives value-for-money through a competitive bidding process. In addition, PPPs should comply with the *Competition Act*, 1998 (*Act 89 of 1998*) (hereafter referred to as the *Competition Act*).

In summary, South Africa's PPP framework is aligned to international standards given the existence of effective governance mechanisms separating government from judiciary, institutions supporting PPPs and a framework to support competition in PPP project tendering. Despite this, there are lessons that South Africa can learn from the Brazilian experience.

Results

Lessons for South Africa from Brazil's publicprivate partnership framework

Brazil's water sector PPPs witnessed some growth following the passing of the *Concessions Law* and the *PPP Law*, which allowed states and municipal governments to promulgate their respective PPP regulations as a way of promoting private investment. Significant reforms in the water sector such as the establishment of the National Sanitation Plan, which set out the investment requirements for the water sector; developing water sector policies and guidelines for tariff determination; and the creation of new institutions established at the federal, state and local government levels to improve efficiency in the water sector contributed to the growth of the sector and PPP adoption. In addition, the creation of new institutions played a significant role in attracting private capital in the sector. These institutions support the various activities of the PPP project life cycle.

While South Africa's PPP framework is much aligned with international best practice in most respects, there are areas that need revision. Some of the lessons from the Brazilian experience include the following:

- There is a need to frequently review of the PPP regulatory environment to determine its effectiveness and fit for purpose. South Africa has not undertaken any significant review since the Municipal PPP Regulations were put in place in 2005. Given the low uptake of municipal PPPs, the policymakers should undertake some reviews, understand any hinderances and make the necessary changes accordingly. This has been the case in Brazil, with frequent policy directives used to address specific issues that arose during PPP implementation.
- Creating a framework for fast-tracking smaller PPP projects provides an opportunity for the municipalities to get exposure to PPPs before large-scale infrastructure is considered. South Africa has uniform guidelines for all municipal PPP projects, with no distinction made between small or large projects. Small projects at the municipal level should not be submitted to the government (or equivalent national entity) but considered in each

state (province) or municipality. In Brazil, most states have their own institutional framework for PPPs, and approvals within a specified project value are approved at state level. Several municipal water infrastructure projects are processed much more quickly based on the size of the project.

- A centralised PPP unit, like in South Africa, providing transaction advisory services and approvals may not be suitable in instances where the appetite for PPP projects increases. Centralised PPP units were also deemed to be incapable of promoting, policymaking and simultaneously regulating PPPs. To promote PPPs, a decentralised model is being utilised in Brazil, and more powers are given to state-level and larger metropolitan municipalities to formulate PPP units to promote and plan for PPP projects.
- No mandatory ex-post evaluation of PPP projects exists in South Africa. Absent post-evaluation, it takes a long time for policymakers to decipher the limitations of the existing PPP framework. Consequently, this slows down the possibility of further reforms in the PPP framework.

Conclusion

South Africa's policymakers must redesign the municipal PPP framework and approval process to be able to respond to changing environments and address the underlying reasons for the low uptake of municipal infrastructure projects. In Africa, South Africa is among the pioneers of PPP, and accordingly, the lessons from the Brazilian experience equally apply to most African countries. The lessons assist policymakers and scholars in various countries, especially in Africa, on how to design an effective regulatory framework to facilitate the speedy adoption of municipal PPPs in the water sector. These lessons and recommendations may have common application in other African countries, given that South Africa generally is a pioneer in the policy environment.

Acknowledgements

Competing interests

The authors declare that they have no financial or personal relationship(s) that may have inappropriately influenced them in writing this article.

Authors' contributions

D.J.F. was involved in conceptualisation, visualisation, project administration, review and editing of the manuscript and supervision. T.M. was involved in conceptualisation, methodology, formal analysis, writing of the original draft and visualisation.

Ethical considerations

This article followed all ethical standards for research without direct contact with human or animal subjects.

Funding information

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

Data availability

The data utalised are openly available in the public domain.

Disclaimer

The views and opinions expressed in this article are those of the authors and do not necessarily reflect the official policy or position of any affiliated agency of the authors.

References

- Arimoro, A.E., 2018, 'An appraisal of the framework for public-private partnerships in South Africa', *European Procurement and Public Private Partnership Law Review* 13(3), 214–228. https://doi.org/10.21552/epppl/2018/3/8
- Arrobas, D.L.P. & Enei, J.V.L., 2009, Brazil: Framework analysis for public–private partnerships in irrigation, World Bank, Washington, DC.
- Barral, W. & Haas, A., 2007, 'Public private partnerships in Brazil', The International Lawyer 957–973.
- Bayliss, K., 2016, Neoliberalised Water in South Africa, Financialisaton, Economy, Society and Sustainable Development (FESSUD) Working Paper Series, No. 204, FESSUD, London.
- Biygautane, M., Hodge, G.A. & Gerber, P., 2018, 'The prospect of infrastructure publicprivate partnerships in Kuwait, Saudi Arabia, and Qatar: Transforming challenges into opportunities', *Thunderbird International Business Review* 60(3), 329–346. https://doi.org/10.1002/tie.21853
- Boyer, E.J., Van Slyke D.M. & 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. https://doi.org/10.1093/jopart/muv008
- BRICS South Africa, 2018, Good practices on public-private partnership frameworks. 2018 Update, Government Printer, Pretoria.
- De Oliveira, A.R., 2008, Private Provision of Water Service in Brazil: Impacts on Access and Affordability, Munich Personal RePEc Archive, Munich.
- Department of Water and Sanitation (DWS), 2018, National water and sanitation master plan volume 2, version 4.2, DWS, Pretoria.
- Development Bank of Southern Africa (DBSA), 2019, 2019 integrated annual report, DBSA, Midrand.
- eNeto, D.C.S., Cruz, C.O. & Sarmento, J.M., 2019, 'Renegotiation of transport public private partnerships: Policy implications of the Brazilian experience in the Latin American context', *Case Studies on Transport Policy* 7(3), 554–561. https://doi. org/10.1016/j.cstp.2019.07.003
- Fourie, D.J., 2008, 'The contribution of public private partnerships to economic growth and human capital development: A South African experience', *Journal of Public Administration* 43(4), 559–570.
- Gauteng Infrastructure Financing Agency (GIFA), 2019, Annual report 2018/19, GIFA, Johannesburg.
- GreenCape, 2017, Water: Market intelligence report, GreenCape, Cape Town.
- Hachez, N., Marx, A., Lein, B., Meuwissen, K., Schmitt, P., Jaraczewski, J. et al., 2017, *Report* on the results of policy benchmarking, FRAME, European Commission, Brussels.
- Hong, P., Hong, S.W., Roh, J.J. & Park, K., 2012, 'Evolving benchmarking practices: A review for research perspectives', *Benchmarking: An International Journal* 19(4/5), 444–462. https://doi.org/10.1108/14635771211257945
- Hsieh, H.F. & Shannon, S.E., 2005, 'Three approaches to qualitative content analysis', Qualitative Health Research 15(9), 1277–1288. https://doi. org/10.1177/1049732305276687
- Jreisat, J., 2010, 'Comparative public administration and Africa', International Review of Administrative Sciences 76(4), 612–631. https://doi.org/10.1177/ 0020852310381205
- Kapfudzaruwa, F. & Sowman, M., 2009, 'Is there a role for traditional governance systems in South Africa's new water management regime?', Water SA 35(5), 683–692. https://doi.org/10.4314/wsa.v35i5.49195
- Khan, H.A., 2016, 'Quality of governance: A paradigm for comparative public administration', South Asian Journal of Policy and Governance 38(1), 1–18. https://doi.org/10.1007/978-3-319-31816-5_1798-1
- Marques, R.C., 2016, 'PPP arrangements in the Brazilian water sector: A doubleedged sword', Water Policy 18(2), 463–479. https://doi.org/10.2166/ wp.2015.115
- Milosevic, D., Djuric, M., Filipovic, J. & Ristic, S., 2013, 'Benchmarking as a quality management tool in public administration', *Inzinerine Ekonomika-Engineering Economics* 24(4), 364–372. https://doi.org/10.5755/j01.ee.24.4.2785
- National Business Initiative, 2019, Strengthening South Africa's water services authorities, Report 02, National Business Initiative, Johannesburg.
- National Treasury, 2019, Budget Review, Government Printer, Pretoria.
- Ntola, Y. & Le Roy, B., 2019, Why South Africa needs an independent water regulator, viewed 30 July 2020, from https://mg.co.za/article/2019-05-02-00-why-southafrica-needs-an-independent-water-regulator/.

- Opara, M. & Rouse, P., 2019, 'The perceived efficacy of public-private partnerships: A study from Canada', Critical Perspectives on Accounting 58, 77–99. https://doi. org/10.1016/j.cpa.2018.04.004
- Pereira, C.A.G., 2014, 'Public-private partnerships (PPPs) and concessions of public services in Brazil', BRICS Law Journal 1(1), 25–43.
- Prats, J., 2019, The governance of public–private partnerships. A comparative analysis, Inter-American Development Bank, Washington, DC.
- Radar PPP, 2015, 'The Landscape on the Brazilian PPP Market', paper presented at the International Meeting Infrastructure and PPPs - Business Opportunities in Infrastructure and PPPs conference, Brasilia, 27–28 April.
- Ribeiro, P.F. & Fabre, E., 2019, 'Multilevel party organizations in a fragmented presidential system: The case of Brazil', *Regional and Federal Studies* 30(4), 525–555. https://doi.org/10.1080/13597566.2019.1591375
- Sampaio, P.R.P. & Sampaio, R.S.R., 2020, 'The challenges of regulating water and sanitation tariffs under a three-level shared-authority federalism model: The case of Brazil', Utilities Policy 64, 1–11.

- The Economist Intelligence Unit (EIU), 2019, The 2019 Infrascope Evaluating the environment for public-private partnerships in Latin America and the Caribbean, EIU, Singapore.
- The Presidency, 2021, State of the Nation Address, Government Printer, Cape Town.
- Victor, D.G., Almeida, P. & Wong, L., 2015, Water management policy in Brazil. ILAR Working Paper, No. 25, University of California, San Diego, CA.
- Walwyn, D.R. & Nkolele, A.T., 2018, 'An evaluation of South Africa's public-private partnership for the localisation of vaccine research, manufacture and distribution', *Health Research Policy and Systems* 16(30), 1–17. https://doi.org/10.1186/ s12961-018-0303-3
- World Bank Group, 2017, 2017 water and sewerage sector highlights, World Bank, Washington, DC.
- World Bank Group, 2020, World development indicators, viewed 06 July 2020, from https://databank.worldbank.org/source/world-development-indicators.