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Have Public Private Partnerships (PPPs) improved performance of urban water utilities in Sub-Saharan Africa? The Case of Uganda.

Dr Sam Kayaga
Water, Engineering and Development Centre (WEDC)
Department of Civil and Building Engineering, Loughborough University
LEICESTERSHIRE LE11 3TU, UK
Email: s.m.kayaga@Lboro.ac.uk

ABSTRACT

Provision of water and sanitation services in many sub-Saharan African countries in the post-independence period was a preserve of State-Owned Enterprises (SOEs). However, as time went by, many SOEs failed to meet the expectations of their customers, governments and international funding agencies: neither could they adequately expand the infrastructure to serve the increasing urban population, nor could they efficiently operate/maintain existing infrastructure to provide good service levels to the existing customer base. Hence, international donor agencies, on which many developing countries relied for financing infrastructure development since the debt crisis of the 1980s, initially demanded for the restructuring of SOEs, and thereafter called for involvement of Public Private Partnerships (PPPs) in the delivery of services. It was expected that the PPPs would not only attract the much needed infrastructure investments to the developing countries, but would also provide a new emphasis on a proactive, performance- and commercial-oriented management.

As a result, since the late 1980s, international water operators have signed management, lease or concession contracts with water utilities in many developing countries. For instance, according to the World Bank's database on private participation in infrastructure projects, by 2005, 17 countries in sub-Saharan Africa had invited international water operators to provide water and sanitation services to urban areas. Nonetheless, the number of people with inadequate service levels for both water and sanitation in developing countries has been increasing. WHO/UNICEF estimates that the number of urban residents in the developing regions without access to safe water increased from 107 million in 1990 to 170 million in 2004, while for sanitation, the number increased from 475 million to 611 million in the same period. The situation is critical in sub-Saharan Africa (SSA) where it was estimated in 2004 that only 56% and 34% of the population had access an improved water source and basic sanitation, respectively.

This paper traces the genesis of PPPs in SSA and provides general trends/scope of PPPs in the sub-continent, and how PPPs have contributed to improvements in service delivery. The paper also draws evidence from a detailed case study on Uganda, where water services in Kampala, the capital city were provided on two occasions through management contracts with different international private operators: between 1988 and 2001 by JB Gauff, a German firm; and between 2002 and 2004, by Ondeo International of France. The paper makes a comparative analysis of the performance trends of the water utility in Kampala during the period when services were being delivered under the PPP arrangements, with the post-2004 period when services are currently being delivered under the New Public Management model.

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1. INTRODUCTION

The Millennium Development Goals (MDGs) agreed upon by the world leaders at the turn of the century have become a global framework for benchmarking development in low-income countries. The MDGs aim at reducing poverty, hunger, disease, illiteracy, environmental degradation and discrimination against women by 2015. Target No 10 of the MDGs is to halve, by 2015, the proportion of people without sustainable access to drinking water and basic sanitation (United Nations, 2007). Access to safe water and basic sanitation services does not only enhance environmental sustainability; it also has direct and highly significant influence on the achievement of other MDGs such as: Goal 1 on the eradication of extreme poverty; Goal 2 on the achievement of universal primary education; Goal 3 on the promotion of gender equality and empowerment of women; and Goal 4 on the reduction of child mortality (World Health Organisation and UNICEF, 2004).

Achieving this and similar MDG targets is a big challenge, particularly in urban areas of developing countries, which will absorb 95% of the 2.02 billions' projected increase in the world's urban population between the period 2000-2030. Most of this population growth is being absorbed by slums. For instance, in Sub-Saharan Africa, 62% of the urban dwellers in 2005 lived in slum conditions, which is defined as lack of at least one of the basic conditions of decent housing, i.e. adequate sanitation, improved water supply, durable housing or adequate living space (UN-HABITAT, 2004)

There are many indicators used for measuring the performance of urban water utilities. In terms of health benefits, the most commonly cited indicator is service coverage. The WHO/UNICEF Joint Monitoring Programme for water and sanitation, which is responsible for evaluating the progress towards achievement of the MDG target on water and sanitation, monitors the service coverage in terms of the proportion of the population using improved drinking water sources and improved sanitation facilities. This information is compiled from national censuses and nationally representative samples such as demographic and health surveys, world health surveys and multiple-indicator cluster surveys. Improved drinking water sources include: piped water into dwelling plot or yard; public tap or standpipe; tube well or borehole; protected dug well; protected spring; and rainwater collection. On the other hand, improved sanitation facilities include flush or pour-flush to piped sewer system, septic tank or pit latrine; ventilated improved pit latrine; pit latrine with slab; and composting toilet (World Health Organisation and UNICEF, 2006).

State-owned enterprises (SOEs) which had been providing utility services (such as water services) in developing countries since independence were plagued by inefficiencies and failed to expand service to meet the rapidly growing demand (Harris, 2003). Hence, international donor agencies, on which many developing countries relied for infrastructure development since the debt crisis of the 1980s, initially demanded the restructuring of SOEs, and thereafter called for public private partnerships (PPPs) in the delivery of services (Nellis, 2005). PPPs may be defined as partnerships in which public sector bodies enter into contractual agreements with the private sector entities to construct and/or

manage public sector infrastructure facilities, such as energy, water/sanitation services, telecommunications, and social services (hospitals, prisons, schools etc) (Darrin and Lewis, 2002). It was expected that the PPPs would not only attract the much needed infrastructure investments to the developing countries, but would also provide a new emphasis on a proactive, performance- and commercial-oriented management (Franceys, 1997).

This paper traces the introduction of PPPs in SSA, provides general trends of PPPs in the sub-continent and provides general trends/scope of PPPs in the qsub-continent, and how PPPs have contributed to improvements in service delivery. Since PPPs in SSA have mainly been active in the water supply rather than sanitation subsector, the scope of this paper is limited to the former. The paper also draws evidence from a detailed case study on Uganda, where water services in Kampala, the capital city were provided on two occasions through management contracts with different international private operators: between 1988 and 2001 by JB Gauff, a German firm; and between 2002 and 2004, by Ondeo International of France. The paper makes a comparative analysis of the performance trends of the water utility in Kampala during the period when services were being delivered under the PPP arrangements, with the post-2004 period when services are currently being delivered under the New Public Management model.

2. THE GENESIS OF PPPs IN UTILITY WATER SERVICES IN AFRICA

Urban water services infrastructure in most African countries has been state-owned since independence, although their management has changed hands. Following the footsteps of the colonial administrations, post-independence governments in Africa created state-owned enterprises (SOEs) to manage urban water and sewerage services, while government departments directly managed rural water and sanitation services. Many of the African leaders were highly influenced by socialist/communist concepts during the struggle for independence, and considered government intervention in the economy a natural order of affairs (Nellis, 2005). However, many SOEs failed to meet the expectations of their customers, governments and international funding agencies: neither could they adequately expand the infrastructure to serve the increasing urban population, nor could they efficiently operate/maintain existing infrastructure to provide good service levels to the existing customer base (Harris, 2003).

By late 1970s, the financial performance of most urban water utilities (managed by SOEs) in Sub-Saharan Africa deteriorated to the extent that direct budget transfers and indirect subsidies such as non-collection of taxes and social security payments could not redeem the SOEs. By early 1980s, the financing gap became so critical that it attracted corrective action from the international financial institutions (IFIs), mainly the World Bank and the International Monetary Fund. The World Bank estimated that by early 1990s, the annual losses from inefficiencies and unsustainable pricing policies were estimated to be nearly equal to annual investment in infrastructure (Harris, 2003). As a

solution, the IFIs provided structural adjustment lending loans, which in addition to supporting 'hardware' infrastructure projects, also required the borrower to take measures to correct unstable imbalances in the economy, which could have been brought about by external shocks such as rapid energy prices or collapse of export markets. These structural adjustment loans were usually rapidly disbursed and were often accompanied by longer-term technical assistance. Africa accounted for about 70% of the SOE-related structure adjustment projects carried out by the World Bank and IMF in the period 1981 to 1990 (Nellis, 2005).

Prior to the disbursement, the borrowing governments had to agree to carry out a wide range of restructuring and performance improvement measures not involving ownership change, and the preparation for public private partnerships. Required reforms included: (i) classification of SOEs; (ii) elimination of state monopolies; (iii) legal and legislative reforms to make SOEs more autonomous, (iv) changes towards cost-based pricing; (v) human resources development including reassessment of staff levels, retraining and redeployments; and (vi) strengthening financial management systems. Whereas some commercial and manufacturing SOEs were subjected to the conditionality of privatisation, similar conditions did not apply to infrastructure utilities (Nellis, 2005).

The level at which these conditions were fulfilled varied from one country to another, and therefore had varying effects on service provision. Firstly, tariffs were increased – although these changes did not necessarily result in a substantial financial impact, as major consumers, particularly government departments did not pay their bills. Secondly, governments were relieved of budgetary burdens, although they continued to provide SOEs guarantees for short-term loans from national banks to cover working capital. Thirdly, there were staff lay-offs, which prompted staff to build up to organised opposition and raise the political temperature against IFIs' interference in the developing countries' economies (Nellis, 2005).

In many instances, the respective governments did not honour their commitments such as match-funding the rehabilitation of the infrastructure, and did not follow through with some of the drastic and sometimes socially painful restructuring measures. For instance, performance contracts and other devices set up to minimise interference of government bureaucrats in management of SOEs did not achieve the objectives, and set performance targets were rarely enforced nor met (Braadbaart, 2005; Harris, 2003). As a result, performance improvement, such as the one attained by Sierra Leone's Guma Valley Water Company was more an exception than the rule (Nellis, 2005).

The poor performance of SOEs could primarily be attributed to the multiple and conflicting objectives the managers were required to achieve. For instance, SOEs were expected to operate in a commercial, efficient and profitable manner, but also be able to provide services at below-cost prices. They were also expected to generate employment for the citizens, deal with state-sanctioned suppliers, and expand services to politically-determined locations, all of which contradicted the first objectives. Other reasons for poor performance have been cited, such as (i) poor initial investment decisions; (ii) inadequate

initial and working capital; (iii) poor collection efficiencies, mainly brought about by non-paying state agencies; (iv) inadequate financial reporting and monitoring systems; (v) a disabling institutional framework; and (vi) poor human resources capacity at managerial and technical levels (Harris, 2003; Nellis, 2005).

The continued poor performance of SOEs providing urban water services in SSA and other developing regions precipitated bold reforms that introduced PPPs in the management of urban water services. Since the late 1980s, International Water Operators (IWOs) have signed management, lease or concession contracts with water utilities in many developing countries. For instance, by 2005, 17 countries in sub-Saharan Africa had invited IWOs to provide water services to their urban areas (Hall and Lobina, 2006).

Besides the dismal performance of water utilities, there were other key factors that compelled governments in developing countries to consider PPPs. During the 1980s, most economies of Sub-Saharan Africa experienced large fiscal deficits, and infrastructure services became an easy target for budget cuts. PPPs in infrastructure were sought to reduce SOEs' over-dependence on the government coffers (Braadbaart, 2005; Harris, 2003). Adoption of PPPs was also buttressed by radical economic theory that originated from the USA in 1960s, which had inspired the American deregulation and British divestiture programmes (Braadbaart, 2005). These ideas, coupled with the disappointments from SOE reform and rehabilitation measures in developing countries, sparked an international debate on adoption of PPPs for infrastructure services. However, unlike policy makers in some developing countries (such from Latin America) , governments from Sub-Saharan Africa (SSA) did not take up PPPs in infrastructure out of their own choice: most SSA leaders embraced PPPs as a major conditionality for accessing international donor funds (Nellis, 2005).

The number of people with inadequate service levels for both water and sanitation in developing countries has been on the increase, notwithstanding the participation of IWOs in service delivery under the PPPs umbrella. WHO/UNICEF estimated that the number of urban residents in the developing regions without access to safe water increased from 107 million in 1990 to 170 million in 2004, while for sanitation, the number increased from 475 million to 611 million in the same period (World Health Organisation and UNICEF, 2006). The situation is critical in sub-Saharan Africa (SSA) where it was estimated in 2004 that only 56% and 34% of the population had access an improved water source and basic sanitation, respectively (International Policy Centre - UNDP, 2007). Section 3 below briefly describes the trends and scope of PPPs adopted in the SSA.

3. TRENDS AND SCOPE OF WATER SERVICES PPPs IN SSA

PPPs for infrastructure services can take many forms and may incorporate some or all of the following features (Darrin and Lewis, 2002): (i) public infrastructure facilities are transferred to a private sector entity (with or without

payment in return); (ii) the private sector entity builds, extends or renovates a facility; (iii) the public sector entity specifies the operating features of the facility; (iv) services are provided by the private sector using a public sector facility for a defined period of time (usually with restrictions on operations and pricing); and (v) the private sector entity agrees to transfer the facility back to the public sector (with or without payment) at the end of the agreement.

The Private Participation in Infrastructure (PPI) project databank maintained by the World Bank classifies the projects as follows (Silva, 2000):

- Operations and management contract: a private entity takes over the management of a state-owned enterprise for a given period. This category includes management contracts and leases.
- Operations and management contract with major capital expenditure: a private entity takes over the management of a state-owned enterprise for a given period during which it also assumes significant investment risk. This category includes concession-type contracts such as build-transfer-operate, build lease-operate, and build-rehabilitate-operate-transfer contracts as applied to existing facilities.
- Greenfield project: a private entity or a public-private joint venture builds and operates a new facility. This category includes build-own-transfer and build-own-operate contracts as well as merchant power plants.
- Divestiture: a private consortium buys an equity stake in a state-owned enterprise. The private stake may or may not imply private management of the company.

Whereas PPPs in energy, telecommunications and transport sectors in Sub-Saharan Africa (SSA) grew at a high level in the early 1990s, PPPs in water and sanitation have been less common, and the pace of reform has been slower and harder to sustain politically (The World Bank, 2004). Governments in Sub-Saharan Africa (SSA) were hesitant to ‘privatise’ water services, because of the sensitive political nature of water. Being a basic necessity, water is seen as a public good, and by some people as a gift of God, which perceptions challenge the principle of full cost recovery for water services (Braadbaart, 2005).

Water services have got some other unique characteristics. Provision of water/sewerage services is a natural monopoly, for which scale economies of water production and network systems make it efficient to have one provider. Secondly, water/sewerage services has both positive and negative externalities, whereby benefits and costs are conferred upon those not party to the transaction, e.g. public health implications and environment degradation, respectively (Darrin and Lewis, 2002; Braadbaart, 2005).

Figure 1 shows the number and level of investment (categorised according to the sector) in SSA for the period 1991-2006. It shows that telecommunications had the largest share of PPPs while water services had the least number of projects and investment finance (The World Bank, 2007). For reasons mentioned in the previous paragraphs, Governments of SSA shied away from

complete divesture of water services infrastructure. Furthermore, whereas there have been 31 PPPs divesture project in energy, telecommunications and transport sectors in SSA between 1991 and 2006 worth US$ 7,182 million, no divesture project reached closure in the water/sanitation sector in SSA (The World Bank, 2007).

Figure 1: Number of PPPs Projects and level of investments in Sub-Saharan Africa for period 1991-2006, categorised per sector

Source: Compiled from The World Bank (2007).

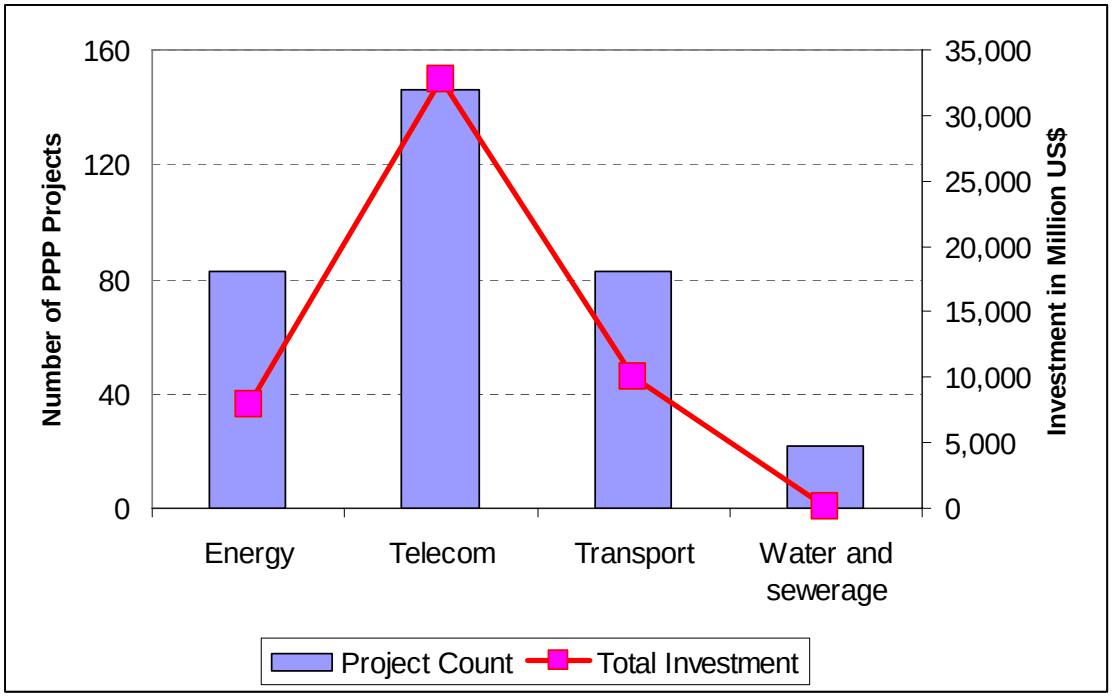


Table 1 shows the build-up of PPPs projects in the water/sanitation sector in SSA in comparison with other regions during the period 1991 to 2006. The table shows that only 22 PPPs projects reached financial closure for provision of water/sanitation services in SSA between 1991 and 2006. Of these, 19 projects (86%) are/were in the form of management or lease contracts, two are under concession contracts, while only one is a Greenfield project (The World Bank, 2007). The table also shows that PPPs contracts reached a peak during the period 1998 to 2001, when they also attracted over US$ 100 million in investment funding.

Table 1: Water services PPPs projects reaching financial closure in Sub-Saharan Africa 1991-2006.

Source: Compiled from The World Bank, (2007).

Financial Closure Year	Number of Projects		Investments in Million US$	
	Sub-Saharan Africa	Total	Sub-Saharan Africa	Total
1991	1	2	0	75
1992	1	6	0	284
1993	1	12	0	6,629
1994	0	17	0	1,362
1995	1	18	0	1,835
1996	1	27	20	1,312
1997	0	39	0	10,161
1998	1	33	0	2,327
1999	5	42	82	6,488
2000	1	45	31	8,589
2001	4	41	3	2,309
2002	2	44	0	1,648
2003	1	43	9	1,452
2004	0	52	0	4,659
2005	1	57	0	1,678
2006	2	48	0	2,003
Grand Total	**22**	**526**	**146**	**52,810**

Table 1 also shows that SSA accounted for only 4.2% of PPPs projects over the period 1991 – 2006 in all the regions of the world. What is even more striking is the fact that over the 15-year period, SSA projects attracted a disproportionate 0.3% of the global investment funding channelled through PPPs water and sewerage infrastructure projects (The World Bank, 2007). The latter fact is not surprising, considering that management and lease contracts, which do not transfer any investment risks to the private sector entity, are the most dominant in SSA. Even then, the two multi-national corporations (Saur and Biwater) with concession contracts for water services in the towns of Dolphin Coast and Nelspruit, both in South Africa, cut their investment funding by 60% and 100%, respectively (Hall and Lobina, 2006).

Table 2: Key PPPs contracts in water/sanitation sector in SSA .

Source: Compiled from Bybliss (2003); Hall and Lobina (2006) and The World Bank (2007).

Country	Type(s) of contract/ (Period in yrs)	Yr of financial closure	Lead MNC	Remarks
Burkina Faso	Management (5)	2001	Vivendi	
Cape Verde	Concession (50)	1999	EdP	Distressed
Central African Republic	Lease (15)	1991	Saur	Terminated
Chad	Concession (30)	2000	Veolia	Terminated
Cote d'Ivoire	Lease	1960	Saur	Renegotiated for 20 years in 1987
Gabon	Concession (20)	1997	Veolia	Ongoing
Ghana	Management (5)	2007	Vitens	Ongoing
Kenya	Management (2)	1999	Gauff	Ended
Mali	Lease (10)	2000	Saur	Renationalised
Mozambique- Maputo & Motola	Lease (15)	1999	Agua de Portugal	Ongoing
Mozambique- 3 other cities	Management (5)	1999	Agua de Portugal	Ongoing
Namibia	Management	2001	Veolia	Ongoing
Niger	Lease (10)	2001	Vivendi	Ongoing
Rwanda	Management (5)	2000	Lahmeya	Ended
Senegal	Lease (10)	1996	Saur	Renewed
S. Africa- Dolphin Coast	Concession (30)	1999	Saur	Distressed
S. Africa-Nelspruit	Concession (30)	1999	Biwater	Distressed
S. Africa -Sutterheim	Lease (10)	1993	Suez	Distressed
S. Africa - Queenstown	Lease (25)	1992	Suez	Distressed
S. Africa- Jo'burg	Management	1999	Suez	Ended
Sao Tome & Principe	Management		Sinergie	Distressed
Tanzania	Lease	2003	Biwater	Terminated
Uganda	Management (2)	1998	Gauff	Ended
Uganda	Management	2002	Suez	Ended
Zambia	Management (5)	2000	Saur	Ended

Table 2 gives a summary of PPPs contracts in SSA. The table shows that many PPPs contracts in SSA have either been terminated or distressed. Indeed, SSA accounts for over 80% of all PPPs contracts in developing regions that have been terminated or attracted disputes between the period 1990 and 2004 (Hall and Lobina, 2006). With the small investment finance apportioned to SSA (0.3% of global investment funding for PPPs between 1991-2006), these developments are not surprising given the misplaced expectations in SSA that PPPs will bring the much needed investment financing for infrastructure expansion (Baybliss, 2003; Hall and Lobina, 2006; The World Bank, 2007). Section 4 briefly describes the general performance of water utilities that were managed under PPPs during the period from late 1980s to 2006.

4. GENERAL UTILITY PERFORMANCE UNDER PPPs IN SSA

Apart from attracting investment finance to water services infrastructure, another key justification for adopting PPPs was grounded in economic theory that private sector participation would bring about the much needed efficiency gains (Braadbaart, 2005; Hall & Lobina, 2006). Studies carried out in other infrastructure services such as telecommunications where PPPs have induced performance improvements in developing countries have shown that competition is more important than ownership in explaining efficiency gains (Parker and Kirkpatrick, 2005). However, published studies conducted with water utilities in SSA have provided mixed results on the correlation between adoption of PPPs and performance improvement. Some case studies have shown improvements in labor productivity, operating costs, reliability/quality of services, and share of the population served (Kirkpatrick, Parker and Zhang, 2006). Other positive changes brought about by PPPs reported in the literature are: (i) strengthening of managerial innovations in the SSA water sector, such as indexation of tariffs to the rate of inflation; (ii) placing water utilities under corporate law and liberating it from the government rules and regulations; and (iii) tangible improvements in cost recovery (Braadbaart, 2005).

Whereas several studies conducted in SSA have shown evidence of positive performance trends, most published econometric analyses of the effects of water privatization in lower-income economies show little evidence that PPPs have resulted in marked improvement in performance (Estache and Rossi, 2002; Parker and Kirkpatrick, 2005). Another study carried out in Africa in the late 1990s reported greater service coverage for utilities under PPPs (Clarke and Wallesten, 2002). However, a study of 21 African water utilities conducted in 1995-97 found that levels of corruption and governance were far more important in explaining difference in efficiency than PPPs (Estache and Rossi, 2002). Similarly, findings drawn from analysis of case studies carried out on Guinea, Gabon, Senegal and Cote d'Ivoire at the turn of the century show that, on the whole, performance of water utilities under PPPs had not changed dramatically: utilities have continued to perform well or not so well, depending

on (i) their state prior to private sector participation, and (ii) factors operating in the external environment (Baybliss, 2003).

To advance the understanding of performance trends under PPPs, a comprehensive analysis was recently carried out on data taken from the Service Providers' Performance Indicators and Benchmarking Network Project database of the Water Utilities Partnerships (WUP) of Africa. Although the database comprised data collected in the year 2000 from 110 water utilities in Africa, the data for this study were collected from up to 84 utilities in13 countries in SSA, of which 14 utilities were managed under PPPs (Kirkpatrick, Parker and Zhang, 2006). The PPPs were management, lease or concession contracts in the countries of Cameroon, Cape Verde, Cote d'Ivoire, Gabon, Ghana, Kenya, Morocco, Nigeria, Republic of Guinea, Senegal, South Africa, Tunisia and Zambia. The range of performance indicators used included labour productivity, proportion of operating costs spent on fuel and chemicals, rate of capital utilisation, average tariffs, percentage of population served, non-revenue water, and hours of availability of service per day. Using F-tests, stochastic frontier and data envelopment analyses, the study found that, when cross-country heterogeneity in the political, legal and economic environment is controlled, there is no strong evidence that water utilities being managed under PPPs contracts perform better than those exclusively operating under public law (Kirkpatrick, Parker and Zhang, 2006).

A recent study carried out by the World Development Movement found that one of the key reasons for lack of performance improvement by PPPs in SSA is that they have not dedicated adequate funds to improve the service quality (Hall and Lobina, 2006). Most of the PPPs contracts operating in SSA, notably lease and management contracts, do not cater for investment by the private sector in extending services. Furthermore, the investment commitments agreed under the few concession contracts operating in SSA have been revised, abandoned or missed. There are several case studies in the literature that illustrated this point. In Libreville the capital of Gabon, which is serviced by a PPPs consortium led by Veolia, the utility's underinvestment was blamed for failure to connect new households, long interruptions in supply and poor water quality (Africa News, 2005; Hall and Lobina, 2006).

In Mali, a 20-year concession was awarded to Saur (a French IWO) in 2000, with the major objective of making significant expansions in service coverage, and improving the technical and financial performance. But Saur was unable to raise the required investment funds to fulfil its contractual obligations, leading to the Government's drastic decision to renationalise the company (Balance and Tremolet, 2005; Hall and Lobina, 2006; World Market Analysis, 2005). The story is not much different with utilities managed under concession contracts in South Africa (Dolphin Coast and Nelspruit) where the PPPs contracts were distressed mainly because the private company was not investing enough funds for improving service quality (Baybliss, 2003; Hall and Lobina, 2006).

In general, PPPs have the potential to improve some aspects of performance. The private sector's technical and managerial competences, combined with sustainable pricing policies and better financial discipline, would enhance

effectiveness and efficiency of service provision. Furthermore, it was anticipated that extra investment funds obtained from the private sector would be injected into improvement of service quality. However, findings from most studies quoted in the literature, some of which have been described in the preceding paragraphs, show that water utilities under PPPs were not or are not necessarily more effective and efficient than those under public management.

One key factor that compounds the relationship between efficiency gains and PPPs is the type of competition that is dictated by the unique characteristics of water services, as discussed in Section 3. Whereas market-competition is feasible in telecommunications and parts of energy such as power generation, the technology of water services and the nature of water as a product restrict the prospect of efficiency gains through market-competition. Huge investment requirements for installing parallel reticulation networks, and water quality implications of mixing water from different supply networks, place a serious restriction on suppliers' competition for water service customers (Kirkpatrick, Parker and Zhang, 2006; Parker and Kirkpatrick, 2005)

Compared to market competition, tender competition, the most dominant type of competition in water services provision, requires a more distinct presence of effective institutions that play the key roles of referees and judges as a prerequisite for performance improvement (Moor, 2000). However, PPPs in SSA were often launched in a regulatory vacuum, as many countries do not have infrastructure services regulators, courts specialising in PPPs contracts, or similar bodies to act as arbitrators (Braadbaart, 2005) In countries where the necessary institutions are in place, they may either be corrupt or inefficient in setting or enforcing standards. A good and recent example of the latter are events that led to the cancellation of the 30-year concession contract for service provision in Buenos Aires, Argentina in mid-2006: poor service levels, tariff hikes and low investment in infrastructure expansion were attributed to excessive state interference, poor regulatory capacity and perceived bias for the regulated firm (Casarin, Delfino and Delfino, 2007).

It should be borne in mind that regulatory functions are necessary whether services are being delivered under PPPs or public management. It seems that the quality of regulation, rather than level of private sector participation, is a critical success factor for determining the extent to which pressures for efficiency are maintained on the service provider (Harris, 2003). Section 5 draws a case study from Uganda, which shows that performance of the National Water and Sewerage Corporation (NWSC) in Kampala (the capital city) did not improve as anticipated when it was managed under PPPs. On the other hand, NWSC has made huge efficiency gains in the past few years under public management.

5. THE KAMPALA (UGANDA) PPPs CASE STUDY

Unless otherwise stated, the material used in this section has exclusively been drawn from a forthcoming World Bank Working Paper on the transformation of

NWSC (Mugisha et al, forthcoming 2009). Water and sewerage services in Kampala (2002 population of 1,208,504), the capital city of Uganda, are provided by the National Water and Sewerage Corporation (NWSC), a government-owned corporatised firm, which was established by the then military government's Decree No. 34 of 1972. NWSC's legal position was strengthened by the NWSC Statute No 7 of 1995, later by the NWSC Act of 2000, and was mandated to provide water and sewerage services to the country's major towns, currently numbering 22, on a cost recovery basis. The other key player in Uganda's water sector is the Directorate of Water Development (DWD), which is mandated to provide water services to rural areas and small towns (with less than 20,000 people).

Since 1998, the water sector has been undergoing reform, aimed at clearly separating the functions of operations, asset holding/management and regulating/overseeing. To date this reform process has not yet been finalised. However, owing to the historical loans obtained by NWSC for infrastructure expansion, which were guaranteed by the Government, NWSC has since the late 1990s been put under the oversight of the Utility Reform Unit of the Ministry of Finance and Economic Planning.

When NWSC operated in only the three largest towns of the country (i.e. Kampala, Jinja and Entebbe), its performance could easily be classified as being barely adequate. As the Government of Uganda rehabilitated and expanded infrastructure in the smaller towns and obliged NWSC to take them over, the capital costs passed on to NWSC, coupled with the eroded economies of scale created a financial burden to the utility. Furthermore, the high disparity in income levels between households in primary and secondary towns meant that customers in the new service areas generally had a lower ability and willingness to pay for increased service levels.

By 1997, NWSC's financial forecasts were quite bleak: not only was it experiencing operating deficits, but it was shortly expected to start servicing the investment loans, to the tune of over 100 million US dollars. These developments were taking place in NWSC's internal environment at the time when adoption of PPPs in developing countries was at a peak, which were marketed by IFIs as, the saviour, to poor utility performance. NWSC's management and other policy makers in the Uganda water sector therefore perceived a management contract with an IWO as an opportunity to correct the prevailing weaknesses and deter potentially devastating threats.

Characteristic of many first generation PPPs in developing countries, NWSC hastily negotiated the management contract with H P Gauff, a German technical consulting firm, without going through a full tendering process, with confidence based on the fact that H P Gauff was participating in a similar contract in Malindi, in neighbouring Kenya. What they did not put into consideration was the fact that although H P Gauff a good infrastructure development consultant, he was venturing into utility management for the very first time. Secondly, these management contracts were running at about the same time and therefore there was no opportunity for HP Gauff to cross-transfer their learning experiences. Thirdly, Malindi was a comparatively smaller city, compared to

Kampala, and in many cases the two service areas required different management approaches.

Furthermore, the hasty procurement process adopted by NWSC management had several key implications. Firstly, since it was single-sourcing, the process missed out on competencies inherent in the competition for the market. Secondly, the skills and the available time were inadequate for collecting the necessary baseline data for effective contract negotiation and subsequent monitoring and evaluation. Thirdly, many stakeholders were not given enough time to internalise the process and buy into the whole PPP concept. Fourthly, the hasty nature also became a breeding ground for accusation of rent-seeking during the procurement process. Fifthly, inadequate time was available to set up and train a team to monitor and evaluate the project.

The three-year management contract codenamed Kampala Revenue Improvement Project (KRIP) started in 1998. Its major objectives were to improve revenue collection, reduce water loss in the reticulation network, and increase service coverage. Therefore the scope of the management contract was limited to operations of water distribution and sales, excluding water production and sewerage services. The client retained responsibilities for financing the operational costs (inclusive of staff costs), and contract monitoring was governed on the basis of cost-of-service. This approach to contract management did not provide enough incentives for the operator to optimise costs. Furthermore, the fact that the client retained most functions of personnel management meant that the operator could not effectively control the staff.

The ill-defined performance targets and the poorly structure monitoring system meant that there was not enough pressure to bear on the contractor to improve operational efficiency. Performance targets were evaluated on a yearly basis, and Table 3 shows the trends for the revenue collection function, with modest improvements as per set targets. Similarly, service coverage was reported to have improved from 51% to 57% between 1998 and 2001. However, most of the data were difficult to verify, especially so as the baseline data were not accurately obtained.

Table 3: Performance trends during the Kampala KRIP Management Contract[24].
Source: Compiled from Mugisha et al (forthcoming 2009).

	1998/1999		1999/2000		2000/2001	
	Target	Actual	Target	Actual	Target	Actual
Billing Efficiency (%)	45%	49%	52%	56%	65%	53%
Billings (10^6 Uganda Shs)	22,372	16,911	25,016	16,233	32,410	20,426
Collections (10^6 Uganda Shs)	17,898	18,348	20,763	15,705	27,549	24,306
Collection Ratio (%)	80%	109%	83%	97%	85%	119%

(1 US$ = 1800 Uganda Shillings [Shs] – the national currency)

When the KRIP contract ended, NWSC senior managers and other key policy makers in the Uganda water sector evaluated the whole experience as part of adaptive learning. These lessons were applied to make modifications in the design, procurement and implementation of the subsequent two-year management contract with Ondeo International (formerly Lyonnaise des Eaux of France) that ran from 2002 to 2004. The contractor registered a local company, Ondeo Services Uganda Ltd (OSUL). The following key changes were made to ensure higher levels of performance from the OSUL management contract:

- The procurement process took about 18 months, and international competitive bidding was applied.
- More NWSC managers were involved in the procurement process, hence securing better buy-in and understanding.
- The contractor took full charge of both the water distribution and wastewater collection, leaving out water production and sewage disposal.
- The contractor took full control of the staff seconded to the project.
- The contract incorporated an operational investment fund, dedicated for network rehabilitation, which was mainly funded by *Kreditanstalt fur Wiederaufbau* (KFW), a Germany international development agency.
- The contract incorporated a performance incentive fee based on billings, collections, non-revenue water and service access.
- There were quarterly reviews, with the contractor required to provide process-oriented reports.

Table 4 shows performance trends during the Kampala OSUL management contract. On the whole the performance was better than during the previous contract. The table shows that the revenue collection targets were met, although billings were much boosted by the tariff adjustments of 4% and 5% in 2003 and 2004, respectively. The rate of increase of new connections improved from a monthly average of 473 in the first year to 681 in the second year. However, despite the injection of substantial funds in the reticulation network, the key performance indicator for reduction of non-revenue water was not achieved. Another target that fell short was connection efficiency, defined as the proportion of active to total connections, which shows how many customers were disconnected mainly due to non-payment of water bills. There was a general feeling within NWSC that OSUL would have performed better if they had not spent about half of the contract time and the bulk of the operational investment fund on merely carrying out baseline studies.

Table 4: Performance trends during the Kampala OSUL Management Contract

Source: Compiled from Mugisha et al (forthcoming 2009).

Performance Standard	BASE YR 2001	YEAR 1 – 2002/03		YEAR 2- 2003/04	
		Target	Actual	Target	Actual
Water billed (10^6 m^3)	1,562	1,765	1,655	1,952.5	1,736.7
Non-revenue water (%)	44.5%	39.8%	44.4%	35.7%	45.5%
Average Monthly billing (Million UShs)	1,611.4	1,820.9	1,818.5	2,014.3	2,006.3
Average Monthly revenue (Million Ushs)	1,567.8	1,900.6	1,805.6	2,123.1	1,914.1
Active Water connections	33,050	39,070	38,659	46,840	45,722
Inactive Water connections	10,783	8,760	11,637	6,920	12,445
Total Water connections	43,833	47,830	50,296	53,760	58,167
Connection efficiency (%)	75.4%	81.7%	76.9%	87.1%	78.6%
Metering efficiency (%) - actual	90.5%	90.9%	92.6%	93.0%	94.6%
Average monthly new connections	473	525	506	580	681

(1 US$ = 1800 Uganda Shillings [UShs] – the national currency)

Much as the performance of OSUL was rather disappointing, there were some positive outcomes of the PPP contract. The main positive outcome was the process-based learning obtained by NWSC. The implementation of the OSUL contract enabled NWSC staff to consolidate their knowledge and skills in PPPs procurement, contract design and implementation. The real experience was supplemented by short courses attended by key staff on relevant topics such as contract procurement and management, negotiation skills etc. These skills became handy when the contractor demanded a renegotiation seeking a 20% increase in the management fee in the first year of the contract, and during negotiations for extension of the contract. The latter negotiations were carried out based on a detailed cost-of-service analysis of all production processes carried out by NWSC. After consultations with their head office, OSUL opted against extension of the contract, and finally handed over the management of the service area back to NWSC in February 2004.

After five years of PPPs, Kampala water supply area was 'received back in the main fold' of NWSC's directly-managed towns, which at the time were benefiting from a series of short-term change management programmes to improve performance. These programmes were started in 1998, by a newly appointed Managing Director (MD), who found an internal environment dominated by low revenue collections, increasing deficits of working capital, stagnant numbers of customers, a high non-revenue water and a demoralised staff.

In the external environment, there were a high number of illegal connections, a negative public relations, and an impeding obligation to start servicing a huge

loan. The new MD rallied the staff towards short-term change management programs with the overall objective of increasing operational and financial efficiency. The main focus areas were improving water production and sewage treatment capacity, increasing efficiency in water distribution, particularly with respect to non-revenue water, improving revenue collection, cost reduction, and enhancement of customer care.

The change programs were codenamed, in a chronological order, 100-Days Programme, The Service and Revenue Enhancement Programme (SEREP), Area Performance Contracts (APCs) and Internally Delegated Management Contracts (IDMCs). APCs were six-monthly internal contracts that NWSC senior management signed with service area staff in which many operational tasks were delegated to the centralised service areas, and where incentives and disincentives were closely pegged to prescribed performance levels. With time, APCs revolved into longer-term IDMCs, in which the areas became more autonomous in the functional tasks.

On the external front, NWSC negotiated a three-year performance contract with the Government of Uganda in 2000, which operationalised the conditions set for the debt freeze. This contract was renewed for the second and third terms. NWSC's contract with the government formed the framework for the NWSC head office to design APCs and IDAMCs with the decentralised service areas. NWSC head office was duly declared as an asset holding authority in 2004.The changes in the external and internal environment of NWSC have mirrored the concepts from the New Public Management (NPM) paradigm with the following characteristics that are specific to water services (Schwartz, 2008):

- Increasing the level of autonomy of the utility,
- Separating regulatory tasks from service provision,
- Creating quasi-competition in the water sector,
- Increasing tariffs to cost recovering levels and ensuring that staff strive to increase customer satisfaction, and
- Increasing accountability for the results produced by the utility.

The results of these change management programmes have been amazing. The operational performance of NWSC has improved tremendously and NWSC has recently been lauded as a utility of good practices in the region, and has been working with other utilities in the region to apply these approaches for their own benefit. Table 5 shows performance trends for NWSC since 1998 when the innovative management approaches started. It should be noted that this performance is aggregated for all the service areas under NWSC, and Kampala accounts for over 60% of the business turnover. The table shows that performance between 2003 and 2006 when NWSC was in charge of Kampala was increasing at a higher rate than previously when Kampala, the main service area was managed under PPPs.

Table 5: A summary of key performance indicators for NWSC during the period 1998 – 2006.

Source: Compiled from Mugisha et al (forthcoming 2009).

	1998	**2000**	**2003**	**2006**
Non-Revenue Water (%)	55.0	43	39	31
Staff Productivity (staff/1000 connections)	36.0	18	12	7
Proportion of Inactive Accts to Total Accts (%)	38.6	26	21	12.2
Collection Ratio (%)	60.0	89.3	95	98
Metering Efficiency (%)	73	82	95	99
Total Number of Accounts	50,826	62,348	93,596	166,692
Service coverage (% of population served)	48	56	62	70
Operating Surplus (US$/month '000')	-300	195	500	926

The Kampala case study results confirm the findings in various literature, some of which have been briefly presented in Section 4 that PPPs have a smaller effect on performance improvement of a water utility, compared to other context-specific factors. Other factors that may have a stronger effect include (Baietti, Kingdom and van Ginneken, 2006) (i) an adequate degree of external autonomy; (ii) full political support to strike a delicate balance between political and financial objectives of the organisation; (iii) effective regulatory structures that ensure internal and external accountability; and (iii) customer orientation philosophy of utility staff.

A critical success factor for performance improvement of water utilities is a high skills level of the human resources, an area that NWSC has been investing in heavily since the early 1990s. Another key success factor is a dedicated, visionary and foresighted leadership to coordinate and harmonise the human and other organisational resources in order to better leverage the utility's strengths, correct its weaknesses, capitalise on opportunities and deter potentially devastating threats.

6. CONCLUSION

Key justifications of IFIs to compel water utilities in SSA to take on PPPs were the need to attract the much needed capital financing for water services infrastructure, and the prospect of performance improvement under PPPs. This paper has reviewed the literature on performance of water utilities in SSA, which shows that neither of these has been automatic for many utilities operating under PPPs in SSA. The type of PPPs commonly operating in SSA are management and lease contracts, which do not entail investment funding on

the part of the operator. The literature has mixed results, with no strong evidence showing the link between PPPs and performance improvement.

The case study on Kampala, Uganda has shown that performance improvements of NWSC, the water utility in Kampala were not as high as expected when it was twice managed by different international operators. On the other hand, NWSC has made impressive performance improvements under the current public management model. Although not conclusive, the results from the literature and the case study seem to point to a greater importance of context-specific factors. There is a need for further research into the effects of an appropriate level of external autonomy, commercial orientation, existence of regulatory systems to ensure internal and external accountability, customer orientation, human resource development and a visionary leadership.

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