

MAXIMIZING THE BENEFITS FROM WATER AND ENVIRONMENTAL SANITATION

Private sector management of water supply services to small towns in Uganda

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In Uganda, 15 private operators are currently managing water supply services to 56 small towns, two of which, Kamuli and Rukungiri, were chosen for a case study of performance, service provision and contractual framework. In all, 27 semi-structured interviews and eight focus group discussions were conducted with users and representatives of town councils, water supply boards, private operators, governmental and professional organisations. Performance data were collected and analysed from the monthly reports of the private operators. The authors concluded that private sector management of water supply services to small towns in Uganda is improving performance against basic indicators though many users, particularly those purchasing water resold from public standposts and neighbourhood yard taps, perceive the cost of water to be too expensive and the connection fee to be unaffordable.

Introduction

The aim of the research was to assess private sector management of water supply services to small towns in Uganda within the context of performance, service provision and contractual framework.

Private sector participation in the management of water supply services to small towns in Uganda developed out of the need to improve efficiency and quality of service delivery by separating asset ownership from systems operations and commercialising service delivery for sustainability (Azuba, 2004a:13).

The Minister of Water, Lands and Environment appoints a Water Authority to take responsibility for water supply within a gazetted Water Supply Area (UPPC, 1995:40), then a Performance Contract is signed between the Minister and a Water Authority, and a Management Contract between the Water Authority and a Private Operator. The Water Authority constitutes a five-member Water Supply Board.

Since 2001, 67 Water Authorities have been gazetted and 15 different Private Operators are managing water services to 56 small towns (Azuba, 2004c).

Methodology

In consultation with the Directorate of Water Development, Kamuli and Rukungiri were selected as case studies based on the characteristics shown in Table 1.

With the permission of the individuals concerned, 27 interviews and eight focus group discussions with users, representatives of Town Councils, members of Water Supply Boards and staff of Private Operators were conducted. Representatives of the Ministry of Water, Lands and Environment, the Directorate of Water Development and the Association of Private Water Operators were also interviewed.

Table 1. Characteristics of the case study towns

Town	Kamuli	Rukungiri
Population 2002	11,221	16,826
Region	East	South West
Scheme typology	Surface/ground, pumped	Groundwater, pumped
Private operator	Bika Ltd	WSS Services Ltd
Fee basis	Percentage of revenue	Base + rates

Source: adapted from Azuba (2004b) and Mukol (2004).

Quantitative performance data were obtained from the monthly and quarterly reports of the Private Operators and Water Authorities respectively.

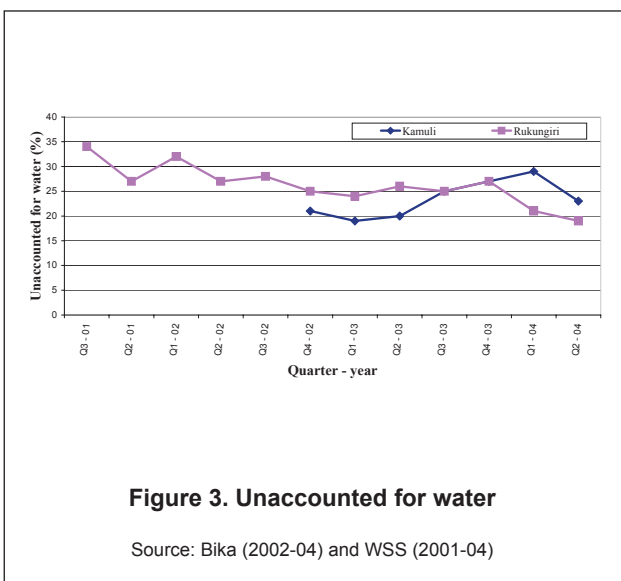
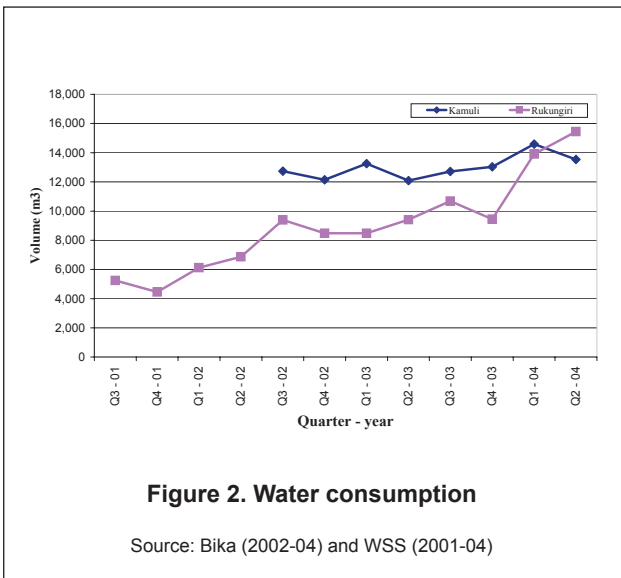
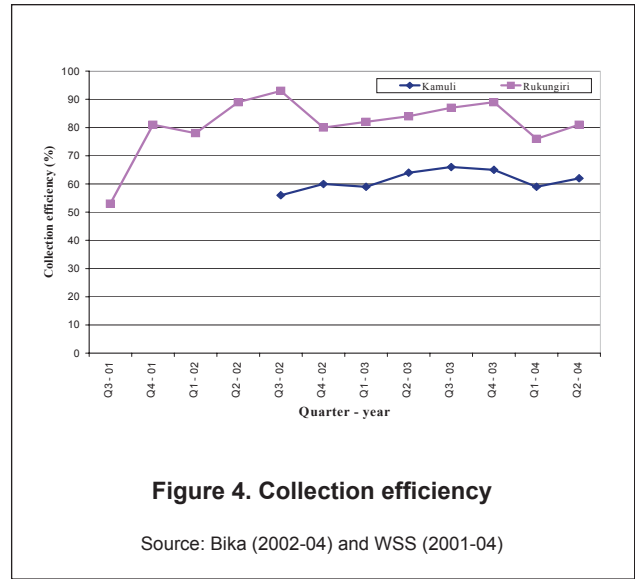
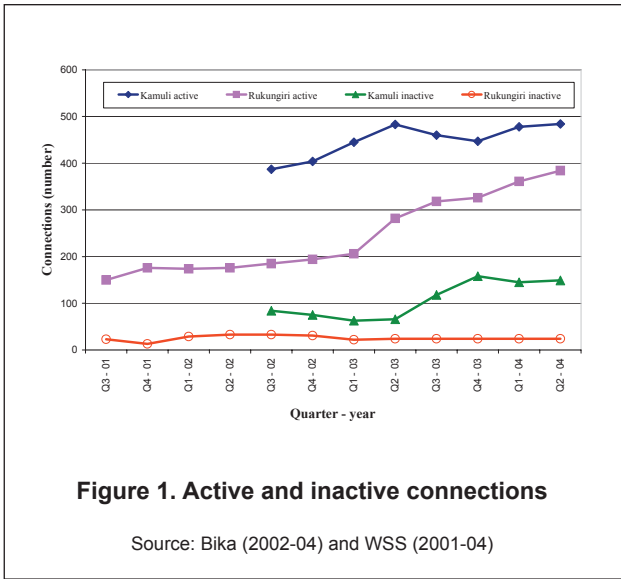
Findings and Discussion

Performance

The increase in active connections in both towns, shown in Figure 1, is mainly due to the increase in the number of yard taps as a result of a UGX 50,000 (USD 29) subsidized connection fee. Based on the number of active connections and users per type of connection, service coverage was estimated at 80 percent in Kamuli and 38 percent in Rukungiri.

The situation in Kamuli of an increasing rate of disconnections immediately following an apparent successful campaign to encourage people to connect shows that users have not been able to pay the monthly bills and that once disconnected found it difficult to pay the arrears and reconnection fee.

Figure 2 shows the increasing trend of water sold. The mean for all types of connection was 10 and 12 cubic metres per connection per month in Kamuli and Rukungiri respectively, which are low compared to a mean of 27 for small towns in Columbia (Rincón, 2002:13).



Calculated domestic water consumption in Kamuli of 13.9, 14.8 and 33.3 litres per person per day for public standposts, yard taps and house connections respectively, and in Rukungiri of 6.8, 18.5 and 26.7 respectively, compare well with users' own estimates of water consumption but are low compared to stated design criteria of 20, 40 and 100 respectively (Cowi, 2000:C2-8).

Figure 3 shows a gradual decreasing trend for unaccounted for water (UFW) in Rukungiri from 34 to 19 percent, while in Kamuli UFW increased to a peak of 29 percent at the beginning of 2004, reducing to 23 percent by mid 2004. In comparison the UFW national average for small towns in Uganda is 24 percent (DWD, 2004:31).

Reported 100 percent metering and billing efficiency in both towns gives greater confidence in the UFW figures.

Figure 4 shows that collection efficiency is relatively constant in Kamuli at 60 percent while in Rukungiri it is 80 percent. In both towns the Police Department has accumulated large arrears though there has been better follow-up in Rukungiri with an accounts receivable/collection period of 1.4 months compared to 6.3 months in Kamuli.

Unit operating cost for Kamuli of UGX 847 [USD 0.49] per cubic metre and for Rukungiri of UGX 729 [USD 0.42] per cubic metre compares with the national average for small towns in Uganda of UGX 1,231 [USD 0.71] per cubic metre (DWD, 2004:31) and USD 0.05 to 0.31 per cubic metre internationally (Yepes and Dianderas, 1996:34). Staff per 1,000 connections of 13 and 12 in Kamuli and Rukungiri respectively favorably compares with the national average for small towns in Uganda of 47 (DWD, 2004:31) and for large towns of 10 (Mauve, 2004:7).

There are fluctuations in power supply and frequent electricity load-shedding, beyond the control of the Private Operators, which disrupt water supply in both towns as a result of which users resort to alternative sources.

There is a long-standing perception held by many water consumers in Kamuli that piped water from the surface

Table 2. Cost to domestic users of piped, resold, point source and vended water

Level in the price chain	Tariff (incl. VAT)/charge [equivalent] (UGX)	
	Per m ³	Per 20-litres
Standpost/yard tap/house	1,170	[24]
Public standpost resale	[2,500]	50
Yard tap/house resale	[2,500-5,000]	50-100
Borehole handpump	[1,650]	33
Protected spring	[0]	0
Water from private vendors	[5,000-10,000]	100-200

Note: 1 United States Dollar (USD) = 1,746 Uganda Shillings (UGX) (New Vision, 2004:35)

Source: based on authors' fieldwork

water source is not fit for drinking even after it has been treated. Limited water quality monitoring is conducted in both towns.

Service provision

Public standposts are operated by vendors who purchase at a uniform volumetric rate and sell for cash on delivery per 20-litre jerry can. Owners of yard taps and house connections purchase per cubic metre and also resell. The cost of water for domestic users is shown in Table 2.

There is little scope for cross subsidy as there are no industrial consumers, few commercial ones and institutions, particularly schools, find the tariffs too high.

Consumers buying from neighborhood yard taps effectively have no rights and there is a case for the provision of a number, based on demand, of regulated public standposts located at strategic sites in each town, in addition to the large number of unregulated yard taps, while at the same time encouraging the resale of water as it plays a major role in improving service coverage.

Private water vendors avail their services when there is no water in the piped system and by default rather than design their unregulated services complement those of the Private Operators.

The authors suggest that reducing the price charged at public standposts as part of a pro-poor policy will, in addition to making piped water more affordable to low-income households, introduce an element of competition and may encourage yard tap and house connection owners to reduce their markup. It is, however, a question of political will as in most small towns the Town Council operates the competing protected point sources such as boreholes with handpumps.

Contractual framework

The Water Authorities, Water Supply Boards and Private Operators have a good working relationship and the Town Clerks are competent, knowledgeable and play a key role as

Secretary to the Board. The Boards in Kamuli and Rukungiri, however, both acknowledged that more sensitization of users on the role of the Board is required.

The Private Operators have sufficient financial and management autonomy within which to operate and there is less interference from politicians who now normally channel their inputs through the respective Boards.

The Water Authorities want a greater say in the setting of tariffs for their towns.

Regulation is by the Water Authorities at local level and by the Directorate of Water Development at national level. The main drawbacks of this arrangement are the weak capacity at town level to effectively regulate and the Directorate of Water Development's lack of independence since it was responsible for designing and constructing the systems.

Conclusions Performance

- Service coverage is increasing through connection ownership and resale of piped water. However, many disconnected customers struggle to reconnect.
- Actual water consumption per person per type of connection is much lower than stated design criteria.
- Levels of UFW still need to be reduced further.
- Collection efficiency is adversely affected by a small number of high volume consumers with large arrears.
- Unit operating costs are lower than the national average but high within an international context.
- Electricity load-shedding is mainly responsible for reducing continuity of supply.
- The perception of poor water quality in Kamuli is affecting consumption of piped water.
- There is insufficient water quality monitoring.

Service provision

- Users pay a high price for piped water and this is a major factor leading to the low consumption of only 15 to 18 litres per person per day at yard taps from where the majority of consumers collect piped water.
- There is little scope for cross subsidy between richer and poorer users.
- Users who buy water resold from yard taps have no rights as unlicensed household water resellers can charge what they want and can also deny access.
- The unregulated services of private vendors complement the piped water service particularly when a system is down due to power problems.

Contractual framework

- Good working relations have been established between the Water Supply Boards and the Private Operators, with the latter having sufficient financial and management autonomy to effectively operate.
- Water Authorities want more involvement in the setting of tariffs though there is currently relatively weak capacity at town level to effectively regulate.

Recommendations

Performance

- The basis for calculating performance indicators should be defined by the Directorate of Water Development and complied with by Water Authorities and Operators.
- Billing frequency should be increased to reduce accumulation of arrears, which, for many low-income customers, could result into extended disconnections due to non-payment of bills.
- Provision of increased storage capacity should be considered as a way of retaining continuity of supply during electricity load-shedding.
- A water quality monitoring framework, balancing regulatory and budgetary requirements, needs to be developed and enforced, and water quality results used to promote consumption of piped water.

Service provision

- A number, based on demand, of regulated public standposts should be located at strategic sites in the towns and water should be resold at a charge lower than the current one.
- Connection fees should continue to be subsidised and users purchasing resold water should be actively encouraged to connect based on informed choice.
- Private Operators should consider formalising a relationship with private vendors since by default the latter provide a service during electricity load-shedding.

Contractual framework

- More sensitisation of users on the role of the Water Supply Board is required.
- Water Authorities should have a greater say in tariff setting, following training in tariff design and administration, with tariff structures based on informed opinion obtained through willingness-to-pay surveys.

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