Pre-paid water meters: a solution to urban service provision challenges?

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Zimbabwe
1. Gwanda water supply operational arrangements

• Supply side (dam, water treatment plant and water supply line) is managed by a water service provider called Zimbabwe National Water authority (ZINWA).

• The distribution side (distribution lines, individual connections) is managed by the Municipality of Gwanda (MOG), the local authority.
2. Background

• Cost recovery is a key element for sustainable water supply.
• Currently most water service providers are experiencing problems with cost recovery.
• High levels of non-revenue water resultant from both system losses and unpaid bills.
• The issue of prepaid water meters has been a controversial one in Zimbabwe
• 220 pre-paid water meters were installed in the town of Gwanda in Zimbabwe
• 100 were installed during the first year of the project (2015)
• A survey on the first 100 prepaid water meters was done from the 11th to the 15th of December 2017.
• The main objective of the assessment was to establish functionality, acceptance as well as impact of the meters.
Project Areas

Gwanda
3. Why prepaid water meters

• Most of the post-paid or conventional water meters were installed more than 30 years ago and are no longer functional.
• Municipality using estimates to determine consumers water bills
• Consumers no longer paying for water and other rates
• Municipality losing out in terms of revenue
• ZINWA installed a prepaid water meter meaning water was sold to MOG before they could distribute it.
A conventional water meter (left) and a prepaid water meter (right)
4. Methodology

• A mixed method of research was employed (qualitative and quantitative)
• A purposive sampling method was employed which targeted 100 households.
• Data collection done through questionnaires, interviews and observations.
• Main sources of data (residents and Gwanda municipality staff)
• An interview schedule prepared and administered to three staff members from the municipality of Gwanda.
• A total of 82 out of the targeted 100 interviewed.
• Respondents were drawn from all the 10 wards of Gwanda.
5. Findings
5.1. Residents’ Levels of satisfaction with prepaid water meters

- 92.6% very happy and satisfied.
- Only 7.4% not happy
- Their satisfaction emanated from the numerous benefits that they derived from the use of prepaid water meters.
5.2. Residents’ opinions on whether or not prepaid water meters were of any benefit to them

- Of benefit 98.8%.
- Of no benefit 1.2%.

Benefits sited:
- a reduction in water bills,
- ability to control water charges,
- no tenant to tenant conflicts
- constant access to water,
- easy access to water and
- no disconnections.
5.3 Advantages of prepaid water meters according to residents

- No big water bills at the end of each month
- Monthly costs are cheaper and more affordable
- Able to control how much we spend each month on water
- Reduced tenant-tenant conflicts over water
- Constant access to water
- Easy access to water
- Reduced water disconnections
- Improved hygiene in the house
- Minimal wastage of water

Series 1:

- No big water bills at the end of each month: 50%
- Monthly costs are cheaper and more affordable: 50%
- Able to control how much we spend each month on water: 46.30%
- Reduced tenant-tenant conflicts over water: 8.50%
- Constant access to water: 8.50%
- Easy access to water: 7.30%
- Reduced water disconnections: 2.40%
- Improved hygiene in the house: 1.20%
- Minimal wastage of water: 23.20%
5.4. Perceptions on prepaid water meters from the service provider (Gwanda Municipality)

- Expressed confidence in prepaid meters.
- Marked increase in revenue (17%-47%)
- Increase in demand for meters
- Reduction in defaulters
- Increased levels of water conservation - reduced from average 1500m³-1300m³
- Planning to install 1400
- Improved frequency of refuse collection (from 2-4 times per month)
- Now able to provide water consistently
5.5. Functionality of the installed prepaid water meters

- 82 meters were functional
- 2 were not functional
- Main reason for non-functionality was lack of back up spares and skill
6. Constraints

• The prepaid water meters that were installed have a short lifespan (at least 5 years)
• Tokens are only available during working days and only at municipality premises
• The unavailability of a mobile token recharge system is an inconvenience to the residents
• Lack of an effective maintenance/repair system for the prepaid water meters owing to lack of back up spares and skill.
• Not pro-poor
7. Recommendations

• Gwanda municipality should ensure availability of water tokens both at its premises and also at other retail outlets to enable easy access for the residents.

• Tokens should be made available at all times (24 hours per day and 7 days per week for the convenience of residents).

• Gwanda municipality should introduce a mobile token recharge system that will ensure that residents will buy water tokens at any time and place.

• Gwanda municipality should source for back up spares for the prepaid water meters and ensure that its staff is adequately trained to carry out instant repairs for broken down meters.

• Gwanda municipality should develop and implement pro-poor water polices e.g. removal of debts.
8. Conclusion

• Despite some constraints—there is now high levels of community acceptance of pre-paid water meters.

• A huge number of residents have registered for the pre-paid water meters

• The majority of those with the gadgets exhibited high levels of satisfaction.

• The municipality of Gwanda view pre-paid water meters positively

• Encouraged by the community’s response which has seen them realizing a marked increase in revenue collection.

• The municipality now provides learning platform for other towns/cities who might soon embark on a similar exercise.

• Noted constraints should be addressed as a matter of urgency so that the system can function without any hindrances.
References


“It will always remain a fact that you can not reap where you did not sow. Prepaid water meters work on a system whereby the consumer pays upfront for the service. No money, no service”

Blessing Silwangani
Prepaid water meters are the way to go, let’s all advocate for them in our various contexts

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