

EXPLORING THE EMPIRICAL EFFICACY OF PREPAID WATER METERS IN A FAILED STATE, A CASE OF HARARE IN ZIMBABWE

Tafadzwa Clementine Maramura, University of the Free State

ABSTRACT

Prepaid water meters have been contentious in Harare, even prior to their implementation with residents citing that the new tools are an unbiased technology which is simply meant to benefit the service provider- Harare City Council, whilst restricting potable water consumption. This study addresses the extensive question of the efficacy of prepaid water meters through the citizen's lens by striking a balance between the Human rights-based approach and the systems theory to water provision. This study also articulates that despite the residents' perceptions on prepaid water meters, potable water should not be distributed free of charge, yet it should be made available as water is a fundamental need. Through a mixed method research design, 271 structured questionnaires were administered to Harare residents in enabling the provision of a measurement of the resident's perceptions regarding the metering system and descriptive statistical analysis was used to determine the results. Ten interviews were also conducted with key informants based on their expertise as the service providers instigating the prepaid water meters. Two focus group discussions with two of the civil water organizations that are crucial catalysts between the Harare City Council and Harare residents were also conducted. Conclusively, the aim of this study was not to disregard prepaid water meters but to understand their efficacy through the lens of the citizens as the service users whose role is very vital role in enabling the effectiveness or ineffectiveness of the meters. Moreover, this study ultimately recommends that the effectiveness of prepaid water meters will only be successful with due reflection on all-encompassing stakeholder engagement and pro-poor approaches for sustainable service provision.

Keywords: Service Delivery, Sustainable Development, Prepaid Water Meters, Pro-Poor; Water Governance.

INTRODUCTION

The effectiveness of prepaid water meters is defined through a variety of platforms, hence, McDonald (2002); Combine Harare Residents Association (CHRA) (2015); UNICEF (2016); UNDP (2015), posit that a prepaid water meter is a definitive cost retrieval tool which is able to execute the computation of water volume used and coerce users to pay for that exact amount. While, Swyngedouw (2006) Majuru et al., (2011); Chirenda et al., (2015); Chigumira and Mujere (2009) assert that prepaid water meters enable service providers to evade the costs aligned to non-payment and debt accrual because the meter water valve automatically shuts down when credit is exhausted. However, McDonald (2002); (Matabvu, 2016) applaud prepaid water meters for being the most appropriate system that promotes payment of services to ensure efficient revenue collection as opposed to conventional water meters which deliver water. Essentially this study addresses the extensive question of the efficacy of the prepaid water meters

through the citizen's lenses by striking a balance between the Human rights-based approach and the systems theory in meeting the potable water needs of the Harare residents.

This study espouses the diverging interpretations on the essence and effectiveness of prepaid water meters on households, with some citing that the tools do not effectively strike a balance between social parity and institutional sustainability (Maphela & Cloete, 2019; Mudzingwa, 2015; Gambe, 2013; JMP, 2017). Harvey (2005); Marvin *et al.*, (1999) cite that prepaid water meters have no other exceptional merits over conventional water meters other than the presumptuous hopes of revenue accrual. Abu-Hilou and Jarrar (2012); Matabvu (2015); Berg and Mugisha, (2010) affirm that prepaid water metering transfers accountability to residents who are left at the expense of the metering system which can disconnect them when they fail to recharge.

However, this study maintains that if revenue accrual is the main objective for the Harare City Council, then its priority target should be the predominant users of bulk water, such as major industries, government and commercial entities rather than domestic users who are yielding into the socio-economic crisis in Zimbabwe. Hence, it becomes imperative to understand these realities empirically and as a result, this section of the study questions why the Harare City Council would advance prepaid water meter implementation, which has already been forbidden in the United Kingdom, Palestine, India, and Namibia among other countries due to their adverse effects (Mapedza & Geheb, 2010; WHO, 2015; OFWAT, 1998; Abu-Hilou & Jarrar 2012). It is significant to note that the essence of this study is not to totally disregard prepaid water meters as being anti-poor or punitive, but however to acknowledge that their effectiveness can be fully exploited with adequate support and full understanding by the public as underpinned by the Human Rights Based Approach to water.

It becomes essential to note that in the course of assessing the effectiveness of prepaid water meters (PPWM), a pro-poor outlook would strike an equitable balance. This is because Fact sheet number thirty-five of The United Nations establishes that the right to water has freedoms and entitlements (UNICEF, 2016; UN-Habitat, 2009). The freedoms include being free from capricious disconnections and entitlements necessitate access to a minimum amount of potable water (Swyngedouw, 2006). Additionally, Shepherd (2004); GOB (2012); Matabvu (2016) note that prepaid water metering has been increasingly gaining impulse in developed nations and the experiences in developing nations are not so plausible. Thus, the implementation of prepaid water meters in Harare without apt consultation from the public could be a limiting factor in fully enabling their effectiveness (Chirenda *et al.*, 2015; Kayaga, 2008). Simultaneously, this study affirms that Harare residents will be involuntarily coerced to use the amount of water they can afford as opposed to their needs thus eroding the core of humanity due to affordability. Hence, the mandate of the study to enable a pathway on the effectiveness of prepaid water meters, from the citizen's lenses for potable water provision.

Understanding the Context of Prepaid Water Meters in Harare

This study understands that prepaid water metering is a system which ensures that users pay an amount of money that is precisely equivalent to the amount of water they will use. This means that prepaid water meters inhibit access to potable water services when a user exhausts their credit or prepaid balance, thereby limiting and denying potable water consumption. Thus, Mudzingwa (2015); Drakeford (1998); BMA (1994) echoed the sentiments that prepaid water meters are water controlling apparatuses which are powered by an expensive technology that is intentionally implemented to coerce payment for potable water services. Of principle to this

study, is that the Zimbabwe Electricity Supply Authority Holdings (ZESA) begun rolling out prepaid electricity meters since 2011 to recoup lost revenue. In similar fashion, the Harare City Council has also been rolling out prepaid water meters since 2016 to recoup lost revenue incurred through non-payment of services by residents.

Gambe (2013) Berg and Mugisha (2010) define prepaid water meters as complex, automated and technologically driven devices which are constructed from different metal and plastic material which permits the discharge of potable water based on payment or non-payment as pictured below. Conversely, Mudzingwa (2015); Matabvu (2016) affirm that prepaid water meter implementation has been contentious in Zimbabwe even prior to its implementation with residents citing that the new tools are an impartial technology which is simply meant to benefit the service provider. It is against this background that this study argues that potable water can never be placed on an equal scale with electricity due to the human right to water and the various entitlements aligned. However, this does not imply that potable water should be merely distributed free of charge, what this means is that it should always be available as a rudimentary need, not a lucrative service.



Source: Maramura (2018)

FIGURE 1 PREPAID WATER METERS IN MABVUKU, HARARE

Zimbabwe's cataloging as a "*failed state*" is undeniable because the country has been ranking number 16 on the Global Foreign Policy's Failed States Index of 2016 after scoring 100.5 (Nhema & Zinyama 2016). Thus, classification of Zimbabwe as a "*failed state*" implies that a greater population of the Zimbabwean populace is surviving below the poverty datum line (Nhema & Zinyama, 2016; OECD, 2017) thus the sustainable provision of potable water should remain a crucial element. This is a factor to reflect on given the population of the Harare residents that is succumbing to great intensities of unemployment and poverty (Demographia World Urban, 2016). The current socio-economic status, therefore, poses complications for residents in pre-recharging the meters thereby limiting the effectiveness of these prepaid water

meters whose main objective is revenue accrual. It is against this background that, Hove and Tirimboi (2011) Mapedza and Geheb (2010) acknowledge that the public service provider should use technology without permitting it to take control over humanity or socio-economic development. The aim of prepaid water meter implementation was to ensure cost recovery by the Harare City Council, but the approach has totally disregarded the public which was not adequately consulted on the effectiveness of the new devices (Musingafi & Chadamoyo, 2013).

This study emphasizes that the effectiveness of prepaid water meters lies in its economic practicality, operator responsiveness and its receptiveness by the public, all of which is absent in this context. Hence, it becomes significant to note that prepaid water meters are not solely “*magical sticks*” that have the clout to address causative potable water challenges (Heymans, Eales & Franceys 2014; Oxfam. 2011.). This is because economic practicality is also a key factor in determining the effectiveness of prepaid water meters which are very costly, attracting a price range of US\$400–US\$550 per meter (Matabvu, 2016:4). The argument of this study is that the public is not simply fascinated by a new and pricey technology, but they are more concerned about the efficient delivery of potable water services which are affordable and reliable.

Transitioning from Non-Payment to Prepayment: A Liberal Move or Punitive Move

Maphela & Cloete (2019); UNDP (2013); OXFAM (2011) assert that the essence of potable water on humankind is significant such that its unavailability can result in the instability of life which can ultimately lead to death from water-borne diseases. Mapedza and Geheb (2010); Machingauta (2010) then assert that developing states have been yielding to service delivery fragmentation as inherited from past colonial rule which did not represent sustainable socio-economic service provision patterns. Likewise, most developing nations have been constantly failing to ensure access to effective potable water supply and Zimbabwe has unfortunately not been exempted from this crisis due to a plethora of dynamics (Chatiza, 2016; OECD, 2006; GOB, 2012; JMP, 2017; UNDP, 2006). The challenges to ensuring effective potable water supply have been so palpable such that goal six of the SDG’s of the Post-2015 Agenda posits that “developing and developed countries should ensure the availability and sustainable management of water and sanitation for all by 2030” (WHO, 2015; JMP, 2017). Goal six of the SDG’s further emphasizes that all developing nations must achieve universal and equitable access to safe and affordable drinking water for all by 2030.

This is a distinct reflection on the significance of potable water supply on the everyday lives of humankind. Similarly, Matabvu (2015) acknowledges that the “scourge” of capitalism has necessitated the implementation of prepaid water meters in Zimbabwe and it is clear-cut that low-income households will be the hardest hit by the socio-economic effects from this transition. In addition, the Harare City Council is assuming that residents have sustainable incomes and available money at their disposal (Mudzingwa, 2015), even when statistics reveal Zimbabwe ranks number 16 on the Global Foreign Policy’s Failed States Index of 2016 with a score of 100.5 (Nhema & Zinyama 2016). Likewise, this study confirms how the Harare City Council is placing high hopes on revenue accrual and discounting the harsh socio-economic effects of prepaid water meters on the public, citing that they should resort to other sustainable ways (Nhema & Zinyama 2016). Hence, the argument of this study that coercing low-income earners to prepay for potable water supply without any alternative source for them is explicitly harsh and borderline irrational.

RESEARCH DESIGN AND METHODOLOGY

Rosnow and Rosenthal (2008:74) acknowledge that qualitative research encourages an interpretation of sense, acquaintance, and observations. Kumar (2005) defines quantitative research as an inquiry of a phenomenon enabled by investigating a concept that can be measured arithmetically and evaluated statistically. This study was advised by the mixed method approach in integrating both qualitative and quantitative research instruments. Leedy (2005) maintains that triangulation in research can support the researcher to depict an objective analysis of the data and findings of the study. Hence, triangulation enabled the author to dissect the research from diverse angles.

Case study Sample and Survey Approach

The qualitative research method prompted the author to use purposive sampling to select the key informants from the Harare city council authorities who managed the prepaid water metering implementation process. Purposive sampling was also used in selecting the participants from civil water organizations because they are the catalysts between the Harare residents and the Harare City Council authorities. The basis for using purposive sampling was to allow the author to select the respondents who have better knowledge of the efficacy of prepaid water meters. Alternatively, quantitative research prompted the author to use systematic sampling in selecting the Harare residents because it adopts simple random sampling at the beginning in order to establish a sampling interval which creates a quasi-random selection method. The author identified the first respondent from the Harare City Council registry and the remaining residents were selected using the sampling interval of the 5th element of the whole population from the Harare City Council registry. The estimated representative sample size for the survey was derived from the Raosoft sample size calculator for the maximum variability of the sample based on the population of Harare (Raosoft, 2004).

Hence from this discourse, structured questionnaires were self-administered to 271 Harare residents because questionnaires are most appropriate when establishing a relationship between variables when there is a large sample involved. Face to face and telephonic key informant interviews with ten Harare City Council officials were undertaken to understand their technical capacity in providing alternative adaption strategies of potable water provision to the residents. Two focus group discussions, with each group consisting of ten participants, were held under the guidance of a moderator. The author used descriptive statistical methods through SPSS to analyze the findings of the study as gathered from the structured questionnaires that were administered to the residents. Content analysis was used to analyze the focus group discussions and the interviews because it gave a descriptive presentation of data. Thematic analysis was ultimately used in discussing the common and recurrent themes from the data gathered.

RESULTS

The study established the gender, age, household size, occupation, marital status and property ownership of the residents within each residential area surveyed in Harare, in identifying their perceptions with regards to the efficacy of prepaid water meters. The study established that of the 271 respondents that participated in the survey 50, 3% were males and only 46, 7% of those respondents were females. It is essential to highlight that gender dynamics are critical to this study because women are responsible for ensuring the availability of potable water for the household as compared to men. The study also established that 7,8% of the 271 respondents who participated in the survey were aged between 16-20 years and 45,6% was aged

between 21-30 years, whilst 17,8% was aged between 31-40 years and 13,9% was aged over 50 years as well. The study results reflect that 46, 7% of the respondents live in a household which has less than 5 occupants, whilst 51, 7% of the respondents live in a household which has a minimum of 6 occupants and only 1, 7% of the respondents live in a household which has more than ten occupants. This is meant to give insight into the socio-economic dynamics of the sampled Harare residents. Understanding these socio-economic dynamics also enables a clear reflection of the efficacy of prepaid water meter implementation for potable water provision in the Harare City Council.

Given the current socio-economic condition in Zimbabwe, the study established that 53, 6% of the respondents are formally employed and this does not imply that they have direct access to money by reflecting on the cash crisis that is prevalent in Zimbabwe. They earn their income in Zimbabwean bond notes, while the prepaid water meters will be charged in US Dollars which defeats the purpose, because it limits their access to surplus cash. Out of the 271 respondents that participated in the survey 33, 5% are unemployed and only 12, 8% noted that they are self-employed which means they have other unconventional means of income. These demographics are significant because if 33, 5% of the population sampled from is unemployed this implies that they will struggle to access money to make payments before accessing potable water.

Perception of Residents towards Post-Paid Meters

Chaminuka and Nyatsanza (2013); Chatiza (2016) affirm that equitable access to potable water supply should be at least rationed as twenty liter's or more per individual within the household and it should be accessible from within one kilometer of the household. The UNDP Human Development Report (2006:65) also asserts that the WHO and the UNDP advocated that, "every person has a human right to a minimum of about twenty liters each day in terms of establishing social minimum provision levels". Unfortunately, a greater population within Harare presently does not have access to potable water supply, such that they store water in various household utensils like buckets and pots. Most of this water is stored for lengthy periods of time because it is gathered in vast amounts to cut out on collection time (Gambe, 2013). As a result, the potable water is either contaminated or discolored when it is used. Nhema and Zinyama (2016) acknowledge that this is an indicator of the failure of the Harare City Council in ensuring residents have access to potable water supply even with the post-paid meters.

Hence the residents would be justified in refuting the prepaid water meters since the City Council is presently failing in ensuring adequate potable piped water supply to the residents and there is no guarantee in administering prepaid water meters. The empirical findings reveal that residential areas in Harare do not have access to piped potable water supply and as a result, they have resorted to conventional and unconventional sources of potable water supply (Mudzingwa, 2015). The Harare City Council has failed the residents as a service provider even with the post-paid meters such that the effects have a greater ripple effect on women and girl children who bear the brunt of household water collection for lengthy periods (Nhema & Zinyama, 2016; Majuru et.al, 2016). Evidence of dissatisfaction with post-paid water meters is predominant because residents must wake up very early or sleep very late to ensure a daily household supply of potable water is secured from the few sources such as water merchants, boreholes or wells. In high-density areas within Harare such as Budiro, Mufakose, Mabvuku, Glen-view, and Glen-Norah, women must wake up before 3 am to catch-up with the long-winding queues at the communal boreholes (World Bank, 2019; Mangizvo & Kapungu, 2010).



Source: Adapted from (CHRA, 2015)

FIGURE 2 CURRENT SOURCES OF POTABLE WATER PROVISION

A greater population of the Harare residents relies on boiling water or disinfecting it through filtration or using water disinfectants. Empirical evidence from this study shows that, out of the total respondents, 31.8% disagreed and 22.7% agreed on the satisfaction with post-paid water meters. Thus, the study revealed that 50% of the CBD residents agreed to be satisfied followed by 25% of the CBD residents who disagreed and strongly disagreed respectively. 29% of the low-density residents strongly agreed to be satisfied with the post-paid meters followed by 25.6%, 23.1% and 17.9% of the low-density residents who strongly agreed, agreed and were not sure respectively. In the medium density areas, 27.7% of the residents disagreed with being satisfied with the post-paid meter. This was followed by 24.6%, 20% and 15.4% of the medium density residents who strongly disagreed, agreed and were not sure respectively. Likewise, 38% of the high-density area residents disagreed with being satisfied with the post-paid meters. This was followed by 23.5%, 19.1% and 16.2% of the high-density residents who agreed, strongly agreed and strongly disagreed respectively to the satisfaction of post-paid water meters.

A Harare Residents Trust Official noted that:

“PPWM’s do not work well because they have a life-span of 3-5 years which is very short as compared to the conventional meters. The fixed payment is better than prepayment in the context of Zimbabwe been going downhill and electricity is a luxury, but water is a human right? It will expose us to water-borne diseases because of the dynamics surrounding prepayment. They should restructure the fixed system so that we get water than employing an infrastructure that will not increase the water supply.”

A Harare City Council Official indicated that:

“From those involved in the PPWM pilot project, positive comments are emanating because residents can now budget and account for water usage as compared to conventional meters. Some are still skeptical due to fear of the unknown.”

Citizen’s perceptions point to the susceptibility to malfunctioning of PPWM’s due to a limited life-span in contrast to the post-paid meters (Thompson & de Wet, 2013; Harvey, 2005), which implies they need constant servicing and maintenance and the financial burden will always trickle down to the residents. Residents also argue that in the context of Zimbabwe as a fragile state PPWM’s are not sustainable because water is a human right and citizens will be affected when they do not have credit, which will expose them to water-borne diseases (WHO,

2015; UNICEF, 2016). Residents ultimately confirmed that PPWM's will tear the social fabric apart, hence the City Council should restructure the existing system and ensure constant potable water supply to meet the water demands before implementing PPWM's because PPWM's will certainly not guarantee water supply. However, the study gathered that some of the residents are receptive of the PPWMs because they will permit them to plan, budget and account for their potable water usage; however, some residents are still skeptical on the efficacy of prepaid water meters for potable water provision.

Citizen's Perceptions towards Prepaid Water Meters

Prepaid water metering essentially entails that payments for potable water services is done before receiving the supply of potable water whilst post-paid metering entails paying for services on a monthly basis after consumption (Mudzingwa, 2015; Chatiza, 2016; Heymans et.al, 2014). Thompson and de Wet (2013) acknowledge that post-paid meters are plausible in providing an allowance of non-disconnection for low-income households that fail to pay for services, because they still get access to potable water supply without prepaying. However, Matsinhe et al., (2014) cite that, post-paid meters have the downside of creating ignorance to the essence of payment for services as a responsible citizen and this ultimately leads to debt accrual, which the Harare City Council is succumbing to.

It is against this background that the study argues that, given the socio-economic status of Zimbabwe, not everyone will be able to prepay and thus the resident will be inhibited from the potable water supply until they recharge again. Xie (2006) also notes that the predicament is that prolonged periods of absence of potable water supply have a direct effect on the quality of water when it is ultimately delivered because it becomes contaminated or unsafe for consumption because the pipes will be idle. Thus, CHRA (2015); Chirisa (2013); Mudzingwa (2015) maintain that prepaid water meters are arguably complex and more technical than post-paid water meters, which makes the former much more susceptible to malfunctioning. Hence, this study notes that the effectiveness of prepaid water meters is highly dependent upon a lot of factors which cannot be easily cultivated by the Harare City Council given the socio-economic status of the country. This study is certainly not meant to disregard the effectiveness of prepaid water meters, but it is imperative to factor in the dynamics that surround prepaid water metering in comprehending the efficacy of prepaid water meters for potable water provision.

Resultantly, of the total 271 respondents that participated in the survey, 35.2% agreed as well as 25% who strongly agreed to the effectiveness of PPWM's over a post-paid meter. The study reveals that most of the respondents that strongly disagreed with prepaid meters being more effective over post-paid meters were from medium density areas with 66.7%. This was followed by 87% of the high-density residents who disagreed and 48.6% of the high-density residents who were also not sure of the effectiveness of the PPWM's over the post-paid meters. Most of the respondents who agreed to PPWM are being more effective than post-paid meter were from low-density areas with 35.5% of the residents confirming this and those who strongly agreed were from the medium density areas 47.7% as highlighted below.

A CHRA Official noted that:

"PPWM's will not efficiently meet the potable water needs of the Harare residents because they will not guarantee quality water provision and we need to understand that it does not change Lake Chivero as the raw water source. Hence it is actually nonsense that PPWM's will efficiently meet potable water needs because they are just an extension of the corrupt system."

A Harare Residents Trust stated that:

“PPWM’s will not meet the needs because even the fixed system does not deliver to everyone and it will actually worsen the present situation. What about the low-income residents, women are already disadvantaged with the current water shortages?”

Feedback from the research comprehended that PPWM’s will unfortunately not meet the potable water needs of the residents because PPWM’s do not change the source of raw water, rather they only change the methods of payment. Hence the residents dispute the effectiveness of PPWM, citing that they are simply an expensive extension of the corrupt City Council. The study also reveals that there is mistrust between the residents and the City authorities because the residents perceive the latter to be corrupt and inefficient because they are misdirecting their focus as service providers into profit makers (Musingafi & Chadamoyo, 2013). The resident’s associations cited a plethora of challenges that are currently underpinning the City Council which cannot inexplicably transform the potable water system by implementing PPWM’s. The argument is that they should redirect their focus to ensuring quality and effective service provision then capitalize on profit making when there is customers satisfaction (Murungweni, 2013; Chirisa, 2013).

Chatiza (2016); Matabvu (2016) argue that the effectiveness of PPWM’s is still yet to be realized, considering there is a simpler conventional system that has been slowly dilapidating due to failure to restructure by the city council for the past forty-one years. The residents also argue that PPWM’s will only change the billing system and the source and means of water supply will remain the same. Thus, the effectiveness of PPWM’s accordingly becomes inexplicable, because if the Harare City Council failed to sustain a simpler post-paid meter, hence what guarantee is there that it will be effectual in ensuring the effectiveness of the complex PPWM’s. This confirms the hypothesis of this study that residents have a negative perception towards the efficacy of PPWM’s for potable water provision. It is essential to note that PPWM’s will not change the potable water quality, which residents already argue to be smelly, dirty and discolored (Chirenda et al., 2015; Majuru et al., 2016). Thus, the respondents cited that even if the PPWM’s were to be effective, the city council is not cooperative due to endemic corruption, so prepaying for water will be promoting corruption. This means that the effectiveness of the PPWM’s will not be fully exploited because residents argue that they will not pay thereby affecting the cash flow system of the Harare city council.

A Harare City Council Official highlighted that:

“In terms of revenue collection, PPWM’s will be more effective because if you do not pay you do not get water but let us not forget this will also have the downside of thrusting residents into unhealthy and alternative sources of water.”

Another Harare City Council Official indicated that:

“Yes, they will be effective since the user pay principle brings a sense of belonging which leads to a dramatic reduction in gross abuse and wastage.”

Results from the study also espouse that, the Harare City Council acknowledges the effectiveness of PPWM’s over post-paid meters in terms of revenue collection since there is an element of coercion to pay in order to access potable water supply. Nonetheless, the city council also noted the challenges that might arise for households that are unable to purchase water since

they will be forced to resort to unsustainable means, thereby creating adverse effects relating to water-borne diseases outbreak (Chatiza, 2016; Chikozho, 2006). The study comprehended that; the city council anticipates that PPWM's will effectively operate against all odds. However, this study would like to note that the city council is solely focused on the element of revenue accrual and ignoring the effectiveness of the PPWM's if residents do not actually pay for the services, given their arguments.

Impact of Consumer Consultation on the Successful Implementation of PPWMs

Proponents of prepaid water meters maintain that, ensuring revenue accrual will enable the service provider to reinvest in the restructuring of the potable water system, which is ultimately beneficial for the public (Bakker, 2012; Bond, 2002). While, Nhema & Zinyama (2016) argue that prepaid electricity implementation has propagated prepaid water implementation due to the success in revenue accrual. However, this study continuously argues that equating electricity to potable water is irrational because electricity is a want and potable water is a basic need that is constitutionally grounded (Constitution of Zimbabwe, 2013). This study, explicitly declares that prepaid electricity metering should never be placed on the same scale with prepaid water metering and this could also be the reason why prepaid water metering has not registered as much success stories and some countries have totally banned them (Drakeford, 1998; OFWAT; 1998; BMA, 1994).

The study establishes that PPWM's will not necessarily promote payment, but they will coerce residents to pay for a service whose quality they are not even certain of. This reflects on the significance of consultation and public participation in the service provision spectrum to ensure comprehensive stakeholder engagement (International Water Association, 2004; Zhou, 2013; Nhede, 2012). Harare Residents Trust disclaims the promotion of payment for water by PPWM's citing that residents currently do not pay for services because they lack access to water supply because the infrastructure is dilapidated, and the council is inept, so the difference is the same because residents have alternatives. They also argue that, the water supply for those who receive it is unclean and beyond human consumption (Nhapi, 2009; Hove & Tirimboi, 2011; Majuru et al., 2016). The Harare City Council should enable capacity investment into the potable water service provision structure. Harare City Council should also facilitate resource efficiency even within the varying dynamics of economic stresses and pressures. Conversely what is generally clear is that without a resuscitation strategy, Harare will continuously endure the risk and adverse effects of more waterborne diseases related illnesses and deaths which impact on the human livelihoods.

CONCLUSION

Based on the findings, this study argues that gender equity, socio-economic development, and humanity can only be cultivated in the framework of ensuring access to potable water supply. As a result, the public service provider should exercise careful thought, pending prepaid water implementation. In this regard, this study explicitly declares that potable water services do not necessarily have to be delivered for free, but then, certain tariff arrangements can be facilitated based on residential areas or means test approach for each household to ensure sustainability for both the service provider and the residents. Furthermore, this study ultimately concludes that the effectiveness of this tool will only be efficacious with due reflection on all-encompassing stakeholder engagement and pro-poor approaches. Hence the Harare city council

should redirect their focus on restructuring the existing system to ensure that it delivers clean water before focusing on prepayment. This is because the crux of potable water is surrounded by affordability, availability, and accessibility of water, therefore, payment is not a fundamental matter per se in the absence of the abovementioned factors.

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