

Geographical Analysis of Water Vendors' Role in Water Service Delivery in Ogbomosho Township

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Abstract

In Nigeria, public water utilities have failed in their duty to provide adequate water services to population. Ogbomosho Township is one of the urban centres in Nigeria that is facing problem of acute water shortage as a result of the inability of the public water corporation in supply water to the town. However, households seek other alternative sources including vended water. This paper therefore assess the role of water vendors in water service delivery in the town. For the purpose of this study, five categories of water vendors were identified. Random sampling techniques was used to select ten wards out of the twenty wards that constitute Ogbomosho North and Ogbomosho South Local Government Areas of Oyo State. Random sampling method was also used to select 15 households and two water vendors from each of the ten wards respectively. Questionnaires and oral interview were used to elicit responses from the respondents. Frequency counts, percentages and descriptive method of data analysis were used to analyze and present the data collected. The findings revealed that despite the problems associated with vended water, it plays major role in solving water problem of the people of the town. Resuscitation of moribund public water supply, recognition of role of water vendors by the government, monitoring their activities by appropriate agencies for quality control among others are recommended to solve the problem of water scarcity in the study area.

Key words: Water vendors, Households, Service delivery

Introduction

Water is a vital resources in the ecosystem since it supports life of all living organisms. Though, it occupies about 70% of the earth's surface, yet a greater percentage of the world's population, most especially in developing countries live without access to safe water. This is due to lack of infrastructure for the treatment of water and its eventual distribution for the populace (Ibironke, Adegoke & Akindipe, 2017). However, limited access to clean and safe water associated with poor water supply, hygiene and sanitation at household level is widening the poverty gap, gender inequalities and the prevalence of water borne diseases (Gender and Water Alliance (GWA), 2006). This has contributed 3.7% of the total global disease burden and 2.2million death each year with women and children in the developing countries being the most affected (World Health Organization (WHO)/United Nations International Children's Emergency Fund (UNICEF), 2008).

Increasing access to improved drinking water is part of Millenium Development Goals (MDGs) adopted by Nigeria and other nations worldwide. About one-tenth of world population – a total of 700 million people – remain without access to improved drinking water, while 2.5billion lack basic sanitation with nearly half living in sub-saharan Africa and access to water of sufficient quantity and acceptable quality remains one of the major problems for many households in most cities of developing countries especially in low income areas (Kjenllen

2000; Acey 2008; Sansom and Bos 2008; Abubakar 2016). To cover this inadequacy in water provision by public utilities in many cities, alternative supplier exist such as non-state water providers (NSPs) including both formal and informal local private providers commonly known as water vendors (Muhammad, 2017). One of the features of water vendor is that they can be unionized (which help them self-regulate water prices, monitor the quality of water distributed, and innovate improved services) or non-unionized (Wutich, Beresford & Carvajal, 2016) which is the case in many low income areas.

As earlier stated, water vending is usually formal or informal. It is formal when it is undertaken by formal bodies, such as water utilities themselves or registered associations, or by small scale informal supplies. Formal vendors generally supply water in tankers and the water is obtained either from treated utility supplies or from registered sources. On the other hand, informal vendors obtain water from many different sources, protected and unprotected and deliver small quantities of water for domestic use in a variety of ways ranging from carts and cycles to containers or wheel barrow, trolleys and animal-drawn or mechanized carts and tanker trucks (Olajuyigbe, Rotowa & Adewumi 2012). In general, vended water is common in many part's of the world where scarcity of supplies or lack of infrastructure limits access to suitable quantities of drinking-water (WHO and UNICEF, 2000). However, the greatest challenges to water service delivery through this mode is the quantity and quality of supplies. Vended water has been associated with outbreaks of diarrhea disease as some of the vended water is obtained directly from unprotected source such as unprotected wells and surface water including rivers/streams, ponds and canals etc. (WHO, 2006)

However, this study seek to examine role play by water vendors in solving problem of water scarcity in Ogbomoso Township. Although Oyo State Water Corporation through Ogbomoso water works is saddled with the responsibility of meeting the water supply needs of the people in the town, but water supply to most parts of the town from public water works has ceased several years back, people therefore rely on other sources of water supply. Prominent among these sources is the vended water source. This vended water source has played and still playing major role in solving water supply problems in Ogbomoso Township.

Historical background of water supply in Ogbomoso

Western Nigeria regional government was responsible for supply of potable water in the 60's through an agency called Water Corporation. Ogbomoso reservoir on the Oba River was completed in 1964, since that time there had been steady and regular supply of tap water for the use of populace of the town. Later on, Oyo State was created and Water Corporation of Oyo State was saddled with the responsibility of providing tap water throughout the state. Then there were several public tap located at strategic places serving the public. One need not to beg or appeal to anybody to have access to these public taps and you are sure of getting water almost round the clock. Although there were few houses own mostly by elite groups with tap water and they pay token at the end of the month. The steady and regular supply of clean potable water continued unabated until middles of 80s when problem started. Water supply was no longer regular until public taps were almost completely phased out of Ogbomoso. This fact was corroborated by (Toyobo, 2014) in his study of residential access to boreholes water supply in Ogbomoso North Local Government Area of Oyo State. He opined that tap water source was moribund and the only functional sources of water supply are dug-well and boreholes.

As at the time water supply problem started a mafia group called water tanker owners emerged. Then, well and borehole digging was not popular and the main water source of these tanker owners was water corporation of Oyo State at Ogbomoso. They used to buy water from Water Corporation and take to town to sell to people. There was even an insinuation then that these tanker owners were the brain behind epileptic water supply been witness at the time. As

population of Ogbomoso begin to grow, water from water corporation and various streams and brooks was no longer enough to meet water needs of the people and this bring about the emergence of wells and boreholes. Initially individuals began to dig wells especially those that relocated from the core of the town to suburb. Later gradually boreholes begin to spring up. Efforts were made by the local, state and federal governments to dig wells and boreholes at strategic places to compliment the efforts of citizens to provide water. Even in recent time politicians are not left out in providing wells and boreholes as their constituency projects and campaign promises.

Despite all these efforts in solving water supply problems in Ogbomoso, people are still been faced with how to get regular and steady potable water especially during the dry season. To solve this problem of water shortage, people embraced vended water to compliment other sources of water to get regular water supply. There are five categories of water vendors in Ogbomoso metropolis. The first category are tanker owners who use water tankers to distribute water to consumers. The second category are the boreholes owners and these group do not go about selling water but people come to them to buy water, the third category are retail water vendors that make use of carts or their shoulder to distribute water in jerrycan to consumers, the fourth category are borehole owners with water tanker and the last category are community based water provider.

Geography of the study area

Ogbomoso is a city in Oyo State, South-Western Nigeria on the A1 highway. It was founded in the mid-17th century. Presently, Ogbomoso Township consists of Ogbomoso North and Ogbomoso South Local Government areas. The headquarters of the North is at Kinnira, while the headquarters of the South Local Government is at Arowomole. Latitudinal and longitudinal coordinates of Ogbomoso township is 8° 08' N, 4° 15' E and 8° 133' N, 4° 250' E. The elevation of the city is 347m (1,138ft). The city is drained by Oba River and several other streams like Laka, Sunsun, Oloko, Onitaba, Oba, Yakun, Ora, Antorun, Osuru, Alalubosa, Gbebo, Kinnira etc. Ogbomoso Township is bounded in the North and East by Surulere Local Government area, in the South by Ogo-Oluwa Local Government area and West by Oriire Local Government area of Oyo State respectively. Ogbomoso has tropical hinterland climate with dry and wet seasons with relatively high humidity during the wet season. The wet season starts around March/April and ends in September/ early October while the dry season starts in October and end in April of every year. Average daily temperature is about 23⁰ – 24⁰ C. the city has guinea savanna vegetation type.

The major economy in Ogbomoso is Agriculture. Cashew plantations are widely spread across the land. People also engage in trading and rearing of domestic animals like goats and sheep. Other activities people engage in include banking, small-scale manufacturing, constructions, handiworks, teaching, water vending etc. Ogbomoso also hosts many institutions like Nigerian Baptist Theological Seminary, Bowen Teaching Hospital, Ladoke Akintola University of Technology, Baptist school of Nursing etc. Media houses in the city include Ajilete F. M. Radio, Parrot F. M. Radio and Nigerian Television Station (N.T.A)

Sources of Water Supply in the Study Area



Uncovered Well



Covered well



River/Stream



Borehole

Methods of Data Collection

The research population is the total number of households and water vendors in Ogbomosho township. As earlier stated, Ogbomosho township consists of Ogbomosho North and Ogbomosho South Local Government Areas respectively, present local council development

areas excluded. There are ten wards in each of the local government areas. For the purpose of this study, five wards were selected in each of the local government area. For Ogbomoso North the selected wards include Masifa/Aguodo, Okelerin, Aaje/Ogunbado, Sabo/Taara and Ora/Saja. For Ogbomoso South, the selected wards include Ilogbo, Ijeru I, Arowomole, Ibapon and Akata. Simple random sampling techniques was adopted to choose the sampled wards. Random sampling was also adopted in the choice of households to be interviewed in each of the selected wards. Fifteen households were chosen in each ward and the questionnaires were given to the heads of each household to response to. Two vendors were randomly picked from each ward and they were orally interviewed to solicit responses from them. Three elderly people were also orally interviewed to solicit responses on historical background of water supply in Ogbomoso Township.

RESULT AND DISCUSSION OF FINDINGS

Five main categories of water vendors were identified in the study area. They include water tanker owner, boreholes owners with water tanker, boreholes owners and retail water distributor who use carts and hand held cans to distribute water to end users. The water tankers owners can be said to be formal vendors who form association and are more organized in the delivery of their services. The other categories can be said to be informal water vendors because they do not belong to any well-organized association. Some water tanker owners do not have boreholes but they do go and fetch water from boreholes owners and from other sources on a commercial basis. The second categories are borehole owners with water tanker they use in selling water to consumer and they also have line up taps where individuals and some retail vendors fetch water for commercial purposes. The third categories are only boreholes owners who also have line up taps where individuals and retail vendors also fetch water for commercial purposes. Some churches and mosques fall into this category who have boreholes with lined up taps where people buy water either for domestic or commercial purpose. The fourth categories are retail water distributors who use either carts or hand held cans to sell water to consumers. This category are common in Sabo/Ttara ward of Ogbomoso North Local Government Area.

However, there is another category of water vendor who involved in making water readily available to people. This category can be said to be community based. They are into the proper monitoring and maintenance of public boreholes provided by either Local Government Council, State government, federal government, well meaning citizens or individual politicians who dug them as their constituency projects. What the communities where they are found do is to pick somebody who will be in charge of the facilities. They do collect token from the fetchers to maintain them and to buy petrol/diesel as the case may be to pump water from the boreholes to overhead tanks since there is no regular power supply.

Table 1: Vendors main source of water supply

Sources	Frequency	Percentage
Covered well	Nil	Nil
Uncovered well	Nil	Nil
Borehole	40	100%
Pipe/Tapwater	Nil	Nil
Stream/River	12	30%

Source: Authors' field survey January, 2019 (Multiple responses)

Almost all water vendors in the study area obtain their water from boreholes. The reason is not far fetch, those who do not have boreholes buy from boreholes owners. No wells owners

be it covered or uncovered will never allow anybody to fetch water from them for commercial purpose. Tap water is no longer running and where it runs occasionally communities will not allow anybody to fetch it for commercial purpose. The findings revealed that in the past water tankers owners used to go to water works to fetch water, but today, it is either too far for them to go or they are not satisfy with quality of water obtain there. Therefore they prefer boreholes to any other sources. 30% of the vendors interviewed consented that they do go to stream/river to obtain water depending on what the water will be used for. Water tanker owners fall into this category especially when the water is to be used for construction purposes.

Table 2: Viability and profitability of water vending business

Viability	Frequency	Percentage
Not viable	27	67.5%
Viable	31	77.5%
Very viable	35	87.5%

Source: Authors' field survey January 2019 (Multiple Responses)

From the table 2, there was a mix reactions among the water vendors interviewed. Their responses were based on season and time of the year. About 67.5% of them were of the opinion that, the business is seasonal in nature, that they do experiences low sale during the rainy season when consumers will find an alternative source in rain water. Larger percentage of them are still of the opinion that business is viable (77.5%) and very viable (87.5%) during the dry season when most of the alternative sources to consumers will no longer available. And that it is during this dry period most constructions works are done in building sites. Other reason advanced for the viability of the business during dry season is that, it is during this time many festive activities are carried out and people will need water for all these ceremonies.

Table 3: Challenges facing you as water vendors

Challenges	Frequency	Percentage
Epileptic power supply	30	100%
Reduction in the quantity of water in the boreholes during dry season	21	70%
Breaking down of water tanker and generating set.	16	53%
Fluctuation in the prices of water	28	93%
Inability to meet the demand of consumers	14	46.7%

Source: Authors' field survey January 2019 (Multiple responses)

Table 3 shows the challenges being faced by water vendors in the study area. One of the challenges is epileptic power supply. According to them, electricity from power holding company is not stable, 100% of the respondents consented to the fact that they have to run generator to pump water from the boreholes which increase production cost. According to some borehole owners there used to be reduction in the quantity of water in the boreholes during dry season. According to them, they do face the problem of breaking down of water tanker vehicles and generators and the problem hinder smooth operation especially when there is high demand for water. Fluctuation in the prices depending on the time of the year is also one of the bane of this business. Moreover, 46.7% of the respondents were of the opinion that when there is high demand for water they may at time not be able to meet the demand of the consumers.

Table 4: Main sources of domestic water supply to households

Sources	Frequency	Percentage
Uncovered well	35	23%
Covered well	102	68%
Borehole	27	18%
From water vendors	121	80.7%
Stream/River water	14	9%

Authors' field survey, January 2019 (Multiple responses)

Table 4 shows the responses of households interviewed concerning the sources of water for domestic use. From the responses, they do not depend on one source of water, they depend on several sources as occasion demand. 23% of them get water from uncovered well to augment other sources. 68% majorly get water from covered well while 18% have access to borehole water. The findings indicates that almost all the household (80.7%) buy water from water vendors at one time of the year or the other to augment other water sources. One of the questionnaire items is an open ended question which ask why do people depend on vended water. The answer according to respondents is not far fetch, other sources of water would not serve them all year round and that larger quantity of water may be needed at one time or the other.

Table 5: Households preference to water sources

Sources	Frequency	Percentage
Pipe water	150	100%
Borehole	150	100%
Covered well	113	75%
Uncovered well	Nil	Nil
Stream/River water	Nil	Nil

Authors' field survey, January 2019 (Multiple responses)

Table 5 indicates household preferences for different sources of water in the study area. The findings shows that all respondents prefer pipe borne water and borehole to any other sources of water supply. From the oral interaction with them, they do not have complete access to borehole and do not have access at all to pipe water despite the fact that the two sources are preferred. The next source is covered well, 75% of the respondents prefer it while none of them prefer sources like uncovered well, stream and river.

Table 6: Households level of satisfaction with vended water

Responses	Frequency	Percentage
Satisfy	37	24.7%
Fairly satisfy	42	28%
Not satisfy	71	47.3%

Authors' field survey January 2019

From table 6, majority of respondents were of the opinion that the water supplied by vendors at time is unsafe and therefore are not satisfied with their services. According to them, the water do contain some pollutants which make it unsafe for drinking, though it may be useful for other purposes.

Table 7: Means of vended water pollution

Means of water pollution	Frequency	Percentage
During loading and offloading	137	91.3%
Pollution at source of water	121	80.7%
Poor handling of the water by vendors	90	60%

Authors' field survey January 2019 (Multiple Responses)

Table 7 indicates the perceptions of the respondents on how vended water is being polluted. 91.3% attributed the pollution to loading and offloading while 80.7% opined that pollution do occur at the sources of water supply available to vendors. However, 60% of the respondents attributed it to poor handling of the water by vendors. This may be as a result of using unclean containers to carry out their operation

Table 8: Water borne diseases associated with vended water

Diseases types	Frequency	Percentage
Cholera	11	7%
Diarrhea	91	60.7%
Typhoid	86	57%
Guinea worm	06	4%
Stomach ache	79	52.7%
Dysentery	30	20%

Authors' field survey January 2019 (Multiple responses)

The commonly reported cases of water-related diseases according to respondents in the study area include diarrhea (60.7%), typhoid (57%), stomach ache (52.7%) and dysentery (20%). These responses cannot be unconnected with the fact that vended water is most at time unsafe and it is usually contaminated either from poor sources or during transportation to end users.

Table 9: Willingness to pay for water services

Sources	Frequency	Percentage
Willing	121	80.7%
Not willing	29	19.3%

Authors' field survey January 2019 (Multiple responses)

From the table above 80.7% of the respondents are willing to pay for water services. But there are conditions attached to their willingness. To them, they are ready to pay if the water is safe, readily available, affordable and there is efficiency in service delivery. While 19.3% are not willing to pay for water services. Their belief was that it is the responsibility of government at all levels and elected politicians to provide water for the populace.

Table 10: Households' perception of water vendors' role in water service delivery

Rating	Frequency	Percentage
Significant	109	72.7%
Fairly significant	41	27.3%
Insignificant	Nil	Nil

Authors' field survey January 2019 (Multiple responses)

On household perception of water vendors' role in water service delivery in the study area, almost all the respondents agreed that water vendors played significant role in solving their

water problem. According to them, as a result of government negligence with respect to water provision, their problems would have been compounded without the intervention of the water vendors. Despite the problems associated with vended water, the residents still appreciate the efforts of water vendors in the provision of water service because nobody knows the time government will come to their aid as regard provision of regular potable water.

Conclusion

The vended water has been accepted as an alternative source of water in the study area. Water vending business will continue to exist and wax stronger as long as there is lack of supply or inadequate supply from Oyo State Water Corporation.

Recommendations

- Oyo state government should resuscitate the moribund water supply system to solve the problem of water scarcity in the state.
- Government should recognize the role of water vendors in the state and give them necessary support to enhance their performance.
- Activities of water vendors should be checked by the government through regulatory agencies like NAFDAC, SON etc for efficient services delivery.
- Pricing system should also be checked by the government to prevent extortion and exploitation.

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The following people were individually interviewed on historical background of water supply in Ogbomoso

Name	Age	Address	Date
Olusola Alabi	69	Ile baara Oba Ijeru, Ogbomoso	09-01-19
Olufeni Oyekale	70	Ile Atoba, Ijeru, Ogbomoso	09-01-19
Pa Jacob Adegoke	81	Ile Akoda Akunko, Ogbomoso	22-01-19