



WATER VENDORS PARTICIPATION IN DOMESTIC WATER SUPPLY IN UNGUWA UKU, TARAUNI LOCAL GOVERNMENT, KANO STATE, NIGERIA

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ABSTRACT

Water vending is seen as a sign of a failure in piped-borne water supply systems, it still plays significant role in providing water especially to urban dwellers in many parts of developing countries, Nigeria inclusive. Therefore, this study examined water vendors participation in domestic water supply in Unguwa Uku, Tarauni LGA Kano state. The data used in this research collected from both primary and secondary sources. The data collected was analyzed using descriptive statistics, where simple percentages and tables used. The data analysis revealed that 57.4% of the residents in the study area patronized the services of water vendors. Patronage of vendor service dominated the frequency with 64.9% of respondent's patronage of vended water. Seasonal variation in vended water supply patterns exist in the study area, with dry season account for the highest water demand and most supplies occurred during morning and evening hours. Based on the challenges bedevilled water-vending activities, the study recommends that vendors should be recognized as an integral part of the system as this may help in the design and implementation of more comprehensive policies that better serve poor end-users, by ensuring greater accessibility and affordability of water vendor's service.

Keywords: Water vendors, domestic water supply, Unguwa Uku, Kano

INTRODUCTION

Increasing access to improved drinking water is part of the Millennium Development Goals (MDGs) adopted by Nigeria and other nations worldwide. About one-tenth of the world population, 700 million people remain without access to improved drinking water, while 2.5 billion lack basic sanitation with nearly half living in sub-Saharan Africa and one-fifth in Southern Asia (UNDP, 2006). Access to the 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 (Kjellen, 2000). The Kano metropolitan has a total water demand of 550 million liters per day but the supply is the only 200 mld about 36 % (Bello *et al.*, 2014). This necessitates looking for alternative sources of water to supplement the deficit. The water supply utilities are in dilapidated states which significantly affect the water supply. Most of these supply utilities are poorly maintained which leads to loss of bulk quantity of water (Nura *et al.*, 2014)

A significant population of the urban dwellers especially the poor population within Kano metropolis rely on small-scale private water vendors as the major source of water for their domestic consumption and expressed willingness to pay for improved private sector water provision services (Sheka, *et al.*, 2020).

Historically, water vending is an old practice world over. In previous literature, a proper discussion was done on definitions, conceptions, operations and some challenges related to water vending in developing countries from a different perspective (Zaroff and Okun 1984; Njiru 2004; Kjellen and McGranahan 2006). Water vending tends to be an integral part of water supply system in developing countries especially in poorer, low-income or informal settlements (Whittington *et al.*, 1991) although vendors can be found in wealthier areas (Kjellen 2000). Water resources for vendors may differ in space and time, for example, in Ethiopia it is primarily from municipal supply systems while in Kenya vendors sell from a combination of municipal supply and

privately owned boreholes and wells. The mode of distribution may be home deliveries (by distributing vendors) using hand-carried, donkey carts, pushcarts or tank trucks, or at reselling stations (from which consumers collect water) (Wutich, 2016). Besides water-related diseases associated with informal water vendors (Kjellen and McGranahan 2006), it is often more expensive resulting in households already paying more than the stipulated bills charged by public utilities (Kjellen 2000; Ahmed 2016). This was attributed to the lack of access to subsidies that would cover their initial investments, operating cost, and then blaming on governance (Njiru 2004). Another problem caused by vendors is the risk of increased traffic accidents (Kjellen 2000). Some problems bedeviling water vending include lack of recognition and regulation by the government. It is of no doubt that recognizing them as part of a regulatory framework will assist in the realization of MDGs target (Njiru 2004) while safeguarding extensive surveillance will ensure safety (Ishaku *et al.*, 2010; Sheshe and Magashi 2014)

Water vending was once regarded as an undesirable and temporary solution to water supply problems (Zaroff and Okun 1984; Kjellen 2000), later on as a coping strategy (Kjellen and McGranahan 2006) but nowadays is increasingly seen as a necessary and acceptable path to achieving the MDGs target (McGranahan, *et.al.* 2006). The role of water vendors in water service delivery accepted as an alternative source of water in the five wards studied, instead of an interim solution, and it is extending coverage and is unlikely to change so long as supply from Kano State Water Board remains as it is (Ahmad, 2016). Water vending means private vending of water for domestic use, but it did not include bottled or packaged water. In some water literature, water vending refers to the reselling or onward distribution of utility water or water from other sources (Kjellén and McGranahan, 2006). Zaroff and Okun (1984) described water vending “as the sale and distribution of water by container, ranges from the delivery of water by tank trucks to the carrying of containers by peoples. The water may be sourced from private or municipal taps, stand posts, rivers or wells and sold either from a public vending station or door-to-door. Water vendors may either sell directly to consumers or act as middlemen, selling water to carriers who in turn serve the consumers. The term “direct vending” is often referred to as “reselling”. In Katko (1991) “reselling means that the owner of the water connection sells water to customers who use to come and fetch it as well as pay the stipulated amount”. Typically, it refers to households selling water from their utility connections, but it also refers to itinerant vending.

Classification of Water Vendors

There are different types of water vending activities, depending on the classification criteria. There are many forms of water vending, there are several ways of labeling and categorizing the different practices. Collignon and Vezina (2000); McGranahan, *et al.* (2006) described water vending

using three broad categories: wholesale vendors, distributing vendors and direct vendors

Wholesale Vendors

A wholesale vendor refers to those who own a borehole or may buy water in large quantity either from private borehole owners or from utility companies. These vendors own or rent tanker trucks with large capacity, which enables them to sell bulk quantities of water to small-scale vendors.

Distributing Vendors

Distributing vendors are those who interact with the consumers directly and provide door-to-door services, and make up the majority of the small water enterprises (Collignon and Vezina, 2000). The majority of distributing vendors are water carters who are usually young, migrant from rural areas with little investment to get started. They carry the water in carts drawn by hand, animals, bicycles or motorbikes. Hand-carrying water vendors haul water in buckets or other smaller containers by hand, without carts or animals, and earn very small wages. Though once abundant throughout many low-income cities, vendors hauling water by hand are declining in number as more use carts to haul the water (Collignon and Vezina, 2000). Tankers or Car tankers may be used by distributing vendors, delivering water to rich households with large storage tanks such as hotels, schools or restaurants. Tankers were used during festivals and special events such as weddings to supply large quantities of drinking water. Distributing vendors tend to charge the highest price since they deliver to the door and serve peak demands for people who have little time for water collection or can pay for the convenience (Abdulkadir, *et.al.*, 2019).

Direct Vendors

Direct vendors have consumers come to them directly to fetch water for their domestic uses. They tend to charge mid-range prices and are in the greatest demand where well water is of poor quality or is too expensive (Abdulkadir, *et.al.*, 2019). In some urban areas in low-income countries where utilities reach few portions of the population, direct vendors can be dominated by households with piped water supply connections that resell the water to households without connections, thereby extending the reach of the public utility either legally or illegally. Water kiosks are another type of direct vendor usually found in Africa and Asia (Kjellen and McGranahan, 2006). There is a variety of kiosk models presented in the literature although a water kiosk is generally described as a stationary water sales point with an operator who monitors the quantity—and in rare instances, the quality of water sold and collects payments. Kiosks are of two categories based on water sources: those that are extensions of public utilities and those that are erect from private or community-owned water sources. Kiosks are often used by the poorest households and allow the purchaser to control the volume of water purchased and total cost since the purchaser travels to the water and does not require additional services such as door-to-door delivery (Collignon and Vezina, 2000).

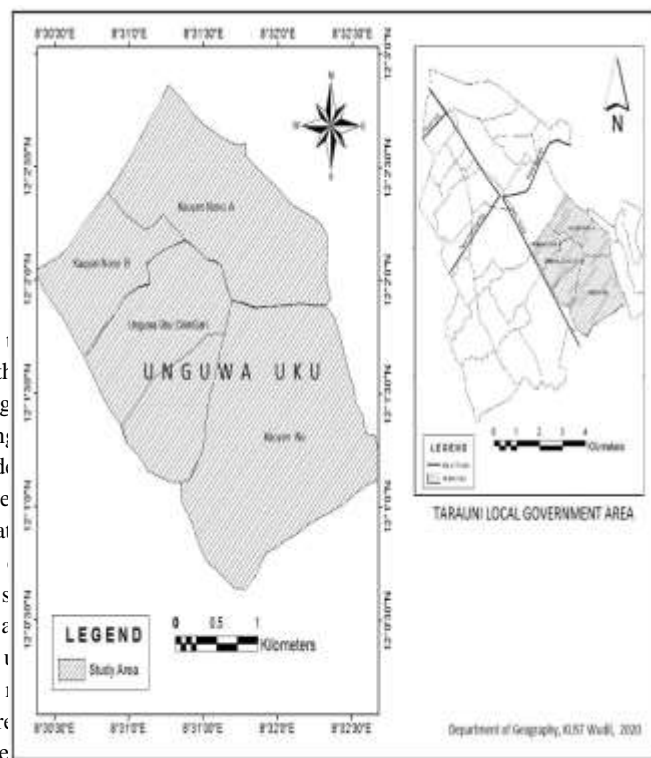
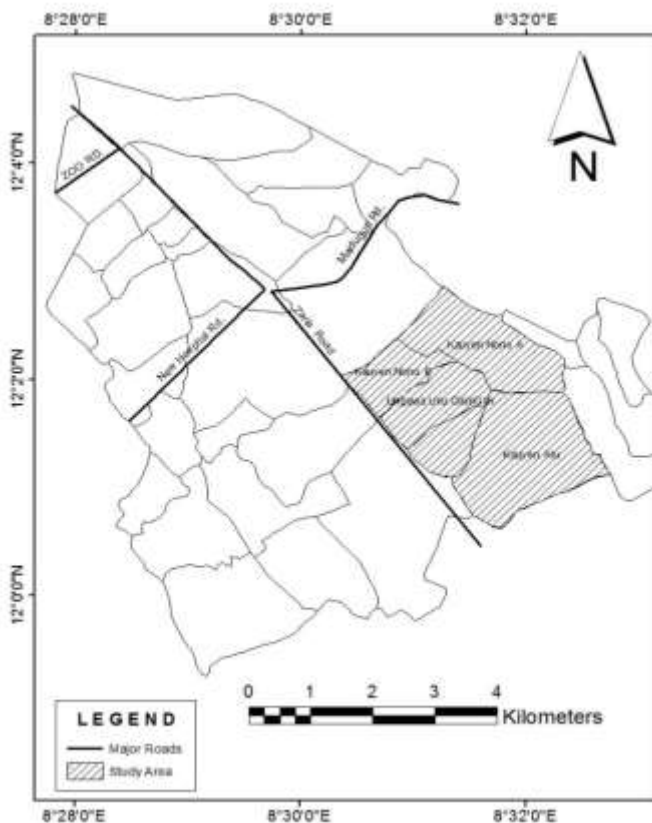
Methodology

Study area

Tarauni local government was created in October 1996. Tarauni local government is located at latitude 11.95862 and longitude 8.54429 and it's bordered with Kano municipal at east, Nassarawa local government at north, and Kumbotso local government at south. Tarauni local government has a

Map of the study area

total land area of 28km² and a population of about 221,367 according to census 2006. Tarauni local government has a total population of 221,367 at the 2006 census. The research will cover Unguwa Uku (Cikin Gari and Kauyen Alu). It has a total of 28km and the postal code is 700. The majority of the people are Hausa/Fulani in nature the population increase is influence by the balance between birth and death rate (NPC, 2006).



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The respondents consist of 75.5% male and 24.5% female. This indicates that male respondents are the majority compared to females. This is because in the study area, males are head of the families are more active in public places compared to females due to religious and cultural reasons. About 58.5 have attended tertiary education while primary and secondary have 11.7% and 10.6 % respectively and other 19.1%. In terms of occupation 43.9% are civil servants while farmers, artisan and housewives are 31.6%, 10.6% and 13.8% respectively. This indicates that civil servant activity dominated as the main occupation in the area because the area is urban. Huge amount of water is needed for personal and environmental hygienic. These results in high demand for water from vendors, the civil servant consume more water than farmers and labourers in the area. The monthly average income of the respondents depict in the table below

Source: Fieldwork, 2019

Table shows

Table 1. Average monthly income from all sources of the respondents in the study area

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Respondents(#)	Frequency	Percentage
1000-18000	49	52.1
18000-37000	38	40.4
3700 to above	7	7.4
Total	94	100.0

monthly income of the respondents from all sources where #1000-#18,000 constitute the majority with 49%, while #37,000 to above constitute the lowest with 7% of the earning income. This indicates that lower-class income earners dominated the area. This is the reason for the high patronage of water vendors because the majority cannot afford borehole construction and tap water supply is limited and erratic. Similarly, the level of income is low many families fetch water from neighbour well or borehole to supplement the water shortage (Hajarat, 2016). This is so because a large number of the residents cannot afford to buy sufficient water from vendors to satisfy their family's domestic demand/ uses.

Water vendors participation in domestic water supply issues

Water vendor patronization

Table 2: Do you patronize water vendor service?

Do you patronize water vendor service	Frequency	Percentage
Yes	54	57.4
No	40	42.6
Total	94	100.0

Source: Fieldwork, 2019

Table 2 shows the percentages of those that patronize water vendor services in the study area, where 57.4% are regular customers to water vendor services, while 42.6% do not patronize. This indicates that without water vending activity the majority of the population will suffer from a water deficit. Most of the residents that have public water utility connections were located along the Zaria road they get water from Tamburawa water main conveying water to metropolitan Kano. Even though they have a pipe water connection at times they might have spent some days without water because of the supply is incessant.

Table 3: Do you patronize water vendors throughout the year?

Do you patronize water vendors throughout the year	Frequency	Percentage

Yes	56	59.6
No	38	40.4
Total	94	100.0

Source : Field work, 2019

Table 3, shows how water vendor services are been patronize in the area, where those patronize water throughout the year constitute 59.6% while those patronize vendors on a seasonal basis constitute 40.4%. This shows that majority are buying water from vendors all year round because they do not have pipe-borne water and cannot afford to construct borehole or drill a well. There are two distinct seasons in the study area that is a rainy and dry reason. During rainy seasons some of the residents resort to drawing water from their or neighbourhood domestic well, and also harvest water as rain is falling. Therefore, water vendors patronization is very low. On the contrary, in the dry season these domestic wells are discharge and water harvesting could not take place, their level of patronization is very high.

Frequency of Water buying from vendors

Table 4: Frequency of Water buying from vendors by the respondents in the study area

Water buying from vendors by the respondents	Frequency	Percentage
Daily	61	64.9
Twice weekly	11	11.7
Thrice weekly	10	10.6
Weekly	12	12.8
Total	94	100.0

Source: Fieldwork, 2019

Table 4, Thrice-weekly shows how frequent in buying water from vendors where daily buying constitute 64.9% while constitute 10.6 % . This indicated that the majority of water use on a daily basis is buying every day from the vendors. This is so because they cannot afford to buy much due to economic constraints and they do not have storage facilities to store water. Hence, residents are continuously eying water vendors for domestic water services

Table 5. Reasons for Price variation of vended water

factors responsible for price fluctuations across the season	Frequency	Percentage
Higher demand for water by households	39	41.5
Shortage of supply at the vendors purchasing point	19	20.2
Distance from vendors purchase points to supply points	26	27.7
Other specify	10	10.6
Total	94	100.0

Source: Fieldwork, 2019

Table 5, shows what causes the price fluctuations across the season higher of water by the household constitute 41.5% while others constitute 10.6%. This indicated that the high demand of water by the household causes the price fluctuations. Similarly, some residents located far away from the water point as such water vendors travelled long distances hence price tend to be a little bit high than those located close to water points. Sometimes, especially in the rainy season the vendors tend to be scarce because

they travel to their respective villages for farming activities and therefore, the price of vended water may increase because the demand is high and the supply is limited. This validates the law of demand which say “the high the demand the high the price”

CONCLUSION AND RECOMMENDATION

CONCLUSION

This research examines the water vendors’ participation in domestic supply in Unguwa Uku Tarauni Local Government. The study covered the dominant issues in analyzing socio-economic variables such as occupation, level of education, level of income and household size that plays a vital role in the life of people in their community as well as the development of each society. It is clear that Pipe-borne water coverage is very limited. This is what paved the way for the dominance of water vendors in the area. About 59% of the respondents patronized water vendors all year round because the connection of public water utility is not there and cannot afford borehole of well drilling. The majority of the respondents buy water from vendors on daily basis about 64% while 12% are patronizing vendors on weekly basis and the rest buys water twice or thrice in a week about 22%. The price of vended water also varies in the area depending on the proximity to the source about 27%, insufficient water vendors 20% and high demand for water account for 41%.

Recommendations

The water vendor’s activities are indispensable in water supply, there is a need for government to integrate and incorporate water-vending activities in the mainstream water supply system.

There are several dilapidated water supply facilities, they should be repaired and upgraded to ensure smooth water supply, even if the waterworks do not expand to the new areas. Hence, the existing ones need to be maintained

The authority is supposed to monitor water vending activities to ensure the quality of water is maintained, because most of the water vendors observed and interviewed are characterized with poor personal and environmental sanitation.

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