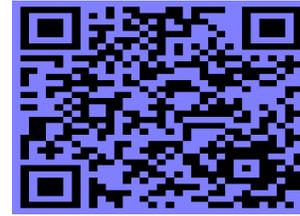


## The Influence of Procurement Practices in Commercialization of Water, and Private Service Delivery in Nairobi County, Kenya



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### Abstract

**Aim:** The purpose of the study was to discuss the effect of procurement practices on commercialization of water and private service delivery in Nairobi City County, Kenya.

**Methods:** Quantitative and Qualitative methodologies of data collection and analysis were implored in this research. The Collection of the data was through key informant interviews and questionnaires. Secondary data was obtained from library research materials, internet search and document analysis. The researcher used descriptive and content analysis techniques to analyze the data. Simple random sampling was used in selecting participants from Nairobi City residents. The target population was 4,397,073 Nairobi City County Residents and 635 Staff of the Ministry of Water, Sanitation and Irrigation; two departments were targeted in the Ministry i.e. The Water, Sewerage and Sanitation Development department and The Water Infrastructure Development Department which has a total of 168 in-post staff.

**Results:** The study found that the components of commercialization of water greatly influences the quality control and equal access to water by the residents. These components are procurement practices, standardization machinery, and the supervision mandate by governmental agencies i.e. WASREB (Water Services Regulatory Board) and WARMA (Water Resources Management Authority). The study concludes that having good procurement practices in place, fosters integrity and professionalism in private water service provision.

**Recommendations:** There is need for the government through its approved agencies WASREB and WARMA, to tailor-make policies that would better suit the unique Kenyan societies' informal service providers, instead of unifying them all to be governed by a single policy. There is need to ensure private water service vendors provide quality and affordable services set out by government and its agencies. The government ought to thoroughly investigate the private water enterprises that have applied to be licensed to provide water services; not just at the national level but also the small-scale water kiosks-ought to be thoroughly scrutinized. The governmental agency WASREB ought to conduct more impromptu checks on WSPs (Water Service Providers) as opposed to only limiting itself to doing quarterly checks and visits.

**Keywords:** *Commercialization of water, private service delivery, WASREB (Water Services Regulatory Board), WARMA (Water Resources Management Authority), procurement practices.*

## INTRODUCTION

Commercialization concept is essential to the growth and development of a Country. This concept has been duly acknowledged and embraced by most governments such as the Malaysian government, has given its maximum support to technology based firms and it's governmental agencies are also providing support in technical expertise and information required in contracting private service providers to ensure there is quality of goods and services for the people. The United States government has also recognized the significant role privatization plays in economic development. Commercialization of services is a trend government adopted due to the under-performance allegations associated with public service delivery (Ajagbe & Ismail, 2013).

The global water crisis has been found to have enormous human and developmental impacts (Albuquerque & Winkler, 2010). According to Barlow and Clacke (2002) fresh water is running out in the world. The World Health Organization reported that over 2 billion individuals worldwide completely lack access to clean water (World Health Organization, WHO, 2017). Governments adopted a liberal market economy style spearheaded by the Washington Consensus in Latin America, which reflected a tenet of financial opportunity best suited for political popular governments (Birdsall, Torre & Caicedo, 2010).

In Africa, it has been reported by Fonjong et al. (2017) that there are water issues and strategies for supplying clean water in Cameroonian cities and peri-urban regions, where 58% of its inhabitants are able to access potable water. The findings by Fonjong et al. 2017 indicated that the denationalization of water had not enhanced the water challenges of the population. They continued to experience an increase in pricing due to the rising demand in utility, while experiencing rationing, shortage, and poor coverage of the water supply. Community water is largely regarded in most African Countries as an informal supply approach however, most States have been positively impacted by the said informal approach, as compared to other approaches used in provision of water supply in Africa, such as the State-driven approaches (Chandrasekaran, et al., 2021). Community water management systems that are commercialized have been analyzed by Obosi (2020) to be applicable in African countries like Tanzania, Malawi, Ghana, and Nigeria. The author argue that municipal water management improves access to water through public-private partnerships, community participation, and improved institutional administration.

In the Kenyan Constitution of 2010, water is preserved as a basic human right. Therefore, the government has mandate to ensure that citizens can access the commodity. However, with the overgrowing demand occasioned by population growth, commercialization is an aspect that the government embraced to intensify the provision, to meet the citizens' needs or demands. Commercialization came with pros and cons. Some of the cons include uneven quality and distribution. Hence, the need to examine the objective of this research i.e. how procurement practices have influenced commercialization of water and private service delivery.

### Statement of the Problem

According to Ledant (2013), commercialization faces challenges of ensuring there is equitable distribution of water services to all, with service providers favoring wealthier segments of the population. The role of government is therefore to ensure there is a stewardship mechanism in place that would provide interventions and increase services to the less privileged. Commercialization of water in Africa was meant to unlock resource access potential to the

residents (Jaglin, 2016) however, various challenges have been brought to fore by this commercialization exercise.

According to Chepyegon and Kamiya (2018), the reality of the occurrence of the private service providers was minimal only two (2) were reported by WASREB in the 2014-2015 report. However, the number of private service providers have since increased to 81 licensed providers based on the 2021 annual report by WASREB. The existing research gaps also inspires further inquiries as to why there is still inadequate, to no supply of water services despite the increase in number of the private service providers, and why there is still inadequacy supply of water, specifically in low-income households by private service providers in Nairobi.

## LITERATURE REVIEW

It is essential to have laid down institutional procedures or frameworks for procuring water services by the various water vendors, to ensure operation efficiency (Ofosu & Owusu, 2013). Purchasing has become a major issue in both public and private service delivery (Ofosu et al., 2013). The process begins with recognition, tender assessment, procuring, and constant management of the agreement until the fulfillment of the terms (Anane et al., 2019).

Hence, there is need to ensure that the procurement practices in private service delivery positively influence the water sector of a nation in terms of the fabrication and utilization of supplies and amenities and being able to cater to the needs of all its citizens without favor (Anane et al., 2019). The Organization for Economic Co-operation and Development (OECD, 2015), recommends the guiding principles of procurement that advocate for the deliberate and complete use and acquisition of resources. It also integrates acquisition of goods with other components of key administration such as budgeting and money-related administration.

In the USA, Hanna and Mc Donald (2021) conducted a study about the future of water municipalization. They reviewed and assessed the previous era of municipalization and the re-privatization/ the historical perspective and the current municipalization era, on the other part. They also reviewed academic research, media reports and the 72 US water cases related to re-municipalization from a database contained by the University of Glasgow (Transnational Institute, 2020). The result of the study was that there is dissatisfaction with privatization of water which has resulted to slow in its growth, due to cost and water quality, in the United States (Hanna & Mc Donald, 2021).

Ghana has put in place the procurement policy and planning measures, which are significant determinants of service delivery that is according to a study by Hanna et al. (2021). In Kenya, Article 227 of the Constitution of Kenya, 2010, provides for acquirement and resource transfer framework that's reasonable, evenhanded, straightforward, competitive, and cost-effective. The Public Procurement and Asset Disposal Act, 2015 was thereafter enacted to operationalize this Constitutional provision. Different stakeholders and sector players within the various institutions are therefore required to ensure that the procurement practices are duly adhered to, to achieve operational efficiency and effectiveness.

## Theoretical Framework

### Stewardship Theory

The stewardship approach is corporate oriented, and not individualistic or rather, favoring a specific class of populi at the expense of others (Hanley, 2022). This theory further develops this research's objectives in analyzing the actions of the managers entrusted with private water service provision. The principles propagated in this theory are that, the managers seek to do their job well, to bring good returns to the organization. They do not work for their own benefit, but because they have a duty to the organization. This theory is important to this research, as there is need for the water resource managers to be good stewards in exercising their oversight role in the commodity's usage and its supply.

### Research Design and Population of the Study

The analysis used was descriptive research design. Questionnaires were used to gather quantitative data while interviews were used to gather qualitative data. The method was preferred, since it gave the participants the chance to give structured material that was useful in the research. The survey was carried from two category levels in Nairobi: the Nairobi residents and the Ministry of Water, Sanitation, and Irrigation. As per the Ministry of Water, Sanitation and Irrigation's 2021 Annual report, there is a total of 635 in-post staff, within the 16 departments in the Ministry. However, the researcher targeted staff from 2 key departments i.e. (i) Water, Sewerage and Sanitation Development department (154), and (ii) the Water Infrastructure Development Department (14) and from the target population residing in random settlements within Nairobi city which has a population of about 4,397,073 (Kenya Population and Housing Census, 2019).

**Table 1: Target population**

Type of participant	Population target
Ministry of water, sanitation, and irrigation	635(168 population size from only 2 departments)
Residents of Nairobi County	4,397,073
<b>Total</b>	<b>4,397,708 (4, 397, 241)</b>

*Source: Researcher*

### Sampling/Sample Size

The researcher utilized probability sampling method, where equal chances of being selected are given to each member of the population (Rahman et al., 2022).

Using Slovin's Formula (T, P, Ryan, 2013): -

$$n = N / (1 + Ne^2)$$

Confidence level of 90%

Margin error- 10%

**Table 2: Sample size**

<b>Population</b>	<b>Population Size</b>	<b>Sample size</b>
Ministry of Water- 2 key Departments (Water Sewerage and sanitation Development, and Water Infrastructure Development Department)	154 + 14=168	62.68
Nairobi City County residents	4,397,073	99.9
<b>Total</b>	<b>4,397,241</b>	<b>162.58</b>

*Source: Researcher*

$$n = N / (1 + Ne^2)$$

$$n=168 / (1+168 \times 0.01)$$

$$n=63$$

From a population of about 100 respondents within the Ministry's respective departments {(i) Water, Sewerage and Sanitation Development department (154 in-post staff), and (ii) the Water Infrastructure Development Department (14 in-post staff) that the researcher utilized, a population size of 168; a sample size of 63 was selected for the study.

Random selection of the remaining 100 sample sizes was conducted by the researcher on Nairobi city county residents.

$$n = N / (1 + Ne^2)$$

$$n=4,397,073 / (1+ 4,397,073 \times 0.01)$$

$$n = 100$$

### **Pilot Testing**

A pilot study was conducted by the researcher to gauge the feasibility of the full research, to measure the validity, and reliability of the instruments. The Pilot study was the first step towards conducting the entire research. It was conducted in Nairobi City County, using 16 Nairobi residents as participants to the pilot study (10% of 163 the full-scale sample size to be used in the study). The participants were randomly selected. This enabled the researcher to identify risks and plan accordingly to avert or minimize risks in the main research. Pilot study also helped in testing the efficacy of the research instruments intended to be used within the research. However, Secondary data gathered from the library and internet search indicated that the research was doable and practicable.

### **RESULTS AND DISCUSSIONS**

The study distributed 100 questionnaires in Nairobi County, specifically in the Ministry of Water, Sanitation and Irrigation. Out of the 100, 88 questionnaires were successfully filled and returned to the researcher giving an 88% response rate.

**Table 3: Response rate**

Category	Frequency	Percentage (%)
Returned questionnaires	88	88
Un-returned questionnaires	12	12
<b>Totals</b>	<b>100</b>	<b>100</b>

*Source: Research Data (2024)*

### Descriptive Analysis of the Study Variable - Questionnaire

#### Procurement Practices

A 5-point Likert scale was used to assess the procurement procedures of the Ministry of Water, Sanitation and irrigation. The participants were asked to respond to various responses by stating whether they Strongly Agree, Agree, Neither Agree/Disagree (Neutral), Disagree, Strongly Disagree. The responses in percentages are tabulated in table 4

**Table 4: Agreement with effect of procurement practices on commercialization of private water service delivery**

	SD (%)	D (%)	N (%)	A (%)	SA (%)	Total (%)	Mean	S. D
The government and its agencies have been monitoring the provision of water by private providers in the neighborhood.	18.2	10.8	1.4	39.9	29.7	100	70.4	1.47
Private water services in the neighborhood operate efficiently.	9.5	20.3	12.2	25	33.1	100	49.4	1.38
The government is ensuring water service standards are adhered to.	12.2	12.2	10.8	29.1	35.8	100	72.8	1.39
Private water service providers in the neighborhood display their permits/licenses in their premises.	29.1	36.5	3.4	28.4	2.7	100	47.8	1.25

*Source: Research Data (2024)*

The study aimed to discover if the government and its agencies have been monitoring the provision of water by private providers in the neighborhood. The distribution of outcomes as indicated in the Table 4 above showed that more approximately 70% of the respondents agreed to the statement (SA = 29.7%, A = 39.9%), 29% Disagreed with the statement (SD = 18.2%, D = 10.8%) and only 1.4% were undecided that the government and its agencies have been monitoring the provision of

water by private providers in the neighborhood. The respondents' perceptions of the efficiency of private water services in their neighborhood, broken down into different levels of agreement. 58.1% agreed with the statement (SA = 33.10%, A = 25%), 29.8% (SD = 20.30%, D = 9.50%) and 12.20% were neutral on their perception of the efficiency of private water services in the neighbourhood.

The study also sought to determine whether the government is ensuring water service standards are adhered to. The distribution of results, as indicated in Table 4.4, revealed that 64.90% of the respondents agreed (35.80% strongly agreed, and 29.10% agreed), 10.80% remained neutral, and 24.30% disagreed (12.20% disagreed, and 12.20% strongly disagreed). Overall, 72.80% of the respondents either agreed or strongly agreed that the government is ensuring water service standards are adhered to.

Finally, respondents were queried about whether private water service providers in the neighbourhood prominently display their permits or licenses on their premises. The breakdown of responses showed that 31.10% agreed (2.70% strongly agreed, and 28.40% agreed), 3.40% were neutral, while 65.50% disagreed (36.50% disagreed, and 29.10% strongly disagreed) with the statement. Overall, a higher proportion of the respondents disagreed that private water service providers in the neighbourhood display their permits or licenses on their premises.

### **Interview Results**

Information was also sought from the Ministry of Water officials and staff and all the 63 respondents participated in the study. Most of the employees sought anonymity and some of them provided their names and designation. From the interviews, water provision is a devolved function of the county governments. It is through the major water companies like the Nairobi Water and Sewerage Company and other companies of similar nature, that Private Water services Providers (WSPs) are contracted. They are heavily regulated by WASREB through issuance of licenses after complying with the set laws.

The government has set up a Water Sector Trust Fund (Water Fund) which seeks to assist in provision of water services in less developed neighborhoods e.g. Kibera slum. It was previously referred to as the Water Services Trust Fund (Water Act, 2016), prior to the repeal of the Water Act, 2002. The main function of the State Corporation is to finance water-related projects in the marginalized and underserved rural and urban areas.

Operation efficiency can be achieved through WASREB's mandate to carry out due diligence. This due diligence can be conducted prior to issuance of licenses to water service providers. Further, monitoring the providers operations in their outlets; is a function which the majority of Ministry's employees thought was not satisfactorily carried out due to the fact that, the board (WASREB) had delegated the said duty to the main companies such as the Nairobi Water and Sewerage Company; to exercise over the (Water Service Providers) WSPs.

One of the challenges pointed out, was water theft, however, the government has from year 2022, established a water police department to deal with water theft and illegal connections. There are also issues of unequal supply of water or rather, standardization of water supplies since some areas have been poorly structured making it challenging to supply water to the such areas. The residents are therefore forced to obtain water from a central/demarcated place.

Water as a commodity is also inadequate and therefore the cost of production versus revenue may vary from region to region. Therefore, the government is said to be keen in conducting cost benefit analysis prior to formulating water service guidelines and fair tariffs as per region. The government is reported to be working closely with the informal service providers to ensure that all water provision is meeting set standards. WASREB conducts impact assessment reports (quarterly) every 3 months, for checks and balances of the private water service providers.

The Researcher further sought clarifications and additional supervisory information from WASREB. In terms of ensuring operation efficiency by water service providers, WASREB sets standards and enforces regulations that ensure accessibility of the water services, efficiency in service provision and affordability of the services (Water Act, 2016). The researcher was further informed that WASREB issues licenses to WSPs and supervises the mainstream companies which (the main companies) in turn, supervises the small-scale water service providers. This means that the main companies e.g. Nairobi Water Sewerage Company are tasked with ensuring and monitoring the small-scale water companies comply with licensing rules.

## **CONCLUSION**

The study concludes that availability of procurement policies in water commercialization inspires integrity, fairness, accountability, and professionalism in private water service provision, to a great extent. It was revealed that procurement policies in commercialization of water, and supervision mandate by WASREB, greatly affect quality control, detailed requirements, and precise terms of reference.

Strategic procurement planning significantly and favorably affects the performance of Kenya's public and commercial water businesses. Thus, financial planning of procurement needs, ongoing needs, and appraisal and accountability for all procurement operations improve the quality of services provided by public and commercial water companies and increase customer satisfaction.

Further, it has been observed that water commercialization helps the government create a new division of labor between the government and private water sectors, increasing the efficiency and development contribution of both sectors. Thus, the success of water commercialization needs to be assessed based on service delivery and availability of the water service rather than the sale, the amount paid to the authorities, or the growth of the sold water firm.

## **RECOMMENDATIONS**

There is need for the government through its approved agencies WASREB and WARMA, to tailor-make policies that would better suit the unique Kenyan societies' informal service providers, instead of unifying them all to be governed by a single policy.

There is a need to ensure private water service vendors, provide quality and affordable services set out by government and its agencies. The government ought to thoroughly investigate the private water enterprises that have applied to be licensed to provide water services; not just at the national level but also the small-scale water kiosks-ought to be thoroughly scrutinized. The governmental agency WASREB ought to conduct more impromptu checks on WSPs (Water Service Providers) as opposed to only limiting itself to doing quarterly checks and visits.

### Further Research Suggestions

A study in line with this topic can be done on a wider range covering more counties and a comparison made to uncover the best practice that can be used to ensure enhanced service delivery within the private and public sector and or in the hybrid sector/ system.

The government (WASREB) should make sure that, before giving the license, they must investigate and choose the qualified individuals who will manage the private enterprises, and not individuals with questionable character. This is because privatization is concentrated in the hands of a small number of people. The government (WASREB) should monitor not only the main companies such as the Nairobi Water and Sewerage Company, but also the small-scale companies /Water Service Providers.

WASREB should also consider conducting more impromptu checks on WSPs, as opposed to doing merely quarterly checks/visits.

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The authors declares no conflict of interest.

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