Graduate School of Development Studies

GOVERNANCE WITHOUT GOVERNMENT: WATER PROVISION IN LAGOS, NIGERIA.

A Research Paper presented by:

Harrison Obayagbona
(Nigeria)

In partial fulfillment of the requirements for obtaining the degree of
MASTERS OF ARTS IN DEVELOPMENT STUDIES

Specialisation:
Population, Poverty and Social Development
(PPSD)

Members of the examining committee:

Dr. Nicholas Awortwi (supervisor)
Dr. Erhard Berner (reader)

The Hague, The Netherlands
12 November, 2008

Disclaimer:

This document represents part of the author's study programme while at the Institute of Social Studies. The views stated therein are those of the author and not necessarily those of the Institute.

Inquiries:

Postal address: Institute of Social Studies
P.O. Box 29776
2502 LT The Hague
The Netherlands
Location: Kortenaerkade 12
2518 AX The Hague
The Netherlands
Telephone: +31 70 426 0460
Fax: +31 70 426 0799

ACKNOWLEDMENTS

I thank God for giving me the opportunity and strength to successfully complete my MA programme. Writing a research paper has been a very challenging but highly rewarding exercise for me. I will therefore like to thank those who have contributed in no small measure to making it a success.

My first thanks goes to my supervisor, Dr. Awortwi, for his guidance, challenging comments and encouragement through all the stages of the research paper. I also give thanks to my reader, Dr. Erhard for his critical but useful comments. I am thankful to my classmates and the entire staff of the PPSD Specialization for the friendly environment they created to make my studying in the ISS a pleasurable experience.

ISS offered me the opportunity of meeting a couple of nice people whose encouragements and useful pieces of advice gave me the motivation to write this paper especially at the darkest moment. I would like to express my gratitude to them all, John Agbonifo, Alex Hottordze, Funmi Abokede, Mulama Muchinti, Maja Madjana, Harrison Odiase, Silver Nwankwo, Fatai, and others too numerous to mention here. I am grateful to my companion, Vera Kusters for her moral and financial support. Without you I wouldn't have achieved this feat.

Most importantly, I am highly indebted to my family for their understanding, encouragement and patience from start to finish of my MA programme.

Tale of Contents

LIST OF TABLES AND FIGURES

Chart

Figures

Tables

LIST OF ACRONYMS

GoN	Government of Nigeria.
LASEPA	Lagos State Environmental Protection Agency
LSWC	Lagos State Water Corporation
MDGs	Millennium Development Goals
MGD	Million Gallons per Day
NAFDAC	National Agency for Food and Drug Administration and Control.
NSAs	Non-State Actors
NWSSP	National Water Supply and Sanitation Policy
PPP	Public-Private Partnership
SAP	Structural Adjustment Programme
SON	Standards Organisation of Nigeria.
SSA	Sub-Saharan Africa
UFW	Unaccounted For Water
UN	United Nations
UNDP	United Nations Development Programme
WHO	World Health Organisation.

Abstract

This paper focuses on governance without government in water provision. It analyses the concept of governance by examining the broad array of water provision channels in Lagos, Nigeria. It traces the historical and ideological antecedents, leading to the withdrawal of state from basic services and the subsequent involvement of Non-state Actors (NSAs) in the provision of basic services. The paper, specifically, looks at the role both state and NSAs play in the provision of water, by assessing their role in the water distribution chain. The NSAs providers of water have a substantial share of the market of water provision, 70% while state has 30%. And yet, the state does not create the enabling environment for them to operate as the majority of NSAs are not recognized and regulated by the government. However, the merit good nature of water demands well functioning institutional and regulatory frameworks. The paper argues therefore, that the state has failed in its role as a provider and regulator in the production and delivery of potable water in Lagos. It maintained that for there to be equity, efficiency and effectiveness in water provision that can promote social and economic development, the state must recognize, facilitate and regulate NSAs.

Keywords: Water provision; Regulation; Affordability; Merit good, Unbundling; Quality; State provision; Non-State Actors.

Relevance to development Studies.

Access to potable water is a global concern, and has occupied a prime place in the global agenda. Hence, goal 7, target 10 of the millennium development goals is specifically aimed at sustainable access to water by all by the year 2015. Access to safe water has a lot of public health benefits, and can promote social and economic development.
Social policy issues, changing role of state, spatial exclusion and public health issues that have been raised in the study are all core issues that come under the purview of development studies.

Chapter 1: Overview

1.1 Introduction

The state is the only entity that can hold claim to the monopoly of coercive power in the society. That is, it has the power to put in place, functioning institutions of rule, mechanisms for the enforcement of rules, collection of taxes, and wealth redistribution; and the state is also an embodiment of social solidarity (Khan, 2002). The role of the state therefore, is to provide law and order, ensure property rights, and provide basic services, all aimed at promoting social and economic development (ibid). In terms of basic services provision, this obliges government to play a pivotal role, which implies public spending on infrastructural development, to ensure that public goods and services are available and also accessible to all, irrespective of their socio-economic status.

In many African countries the provision of basic services such as water has always been the duty of government without formally involving the private sector (Mugerwa, 2003). The strong role government played in water provision was attributed to the perception of water as a merit good which has both negative and positive externalities. Accessibility to safe water can improve public health and promote social and economic development, and the reverse is the case when people have no access to safe water (UNDP, 2006). Furthermore, the state-led approach to development embraced by many African countries after independence impinged on government to take sole responsibility for the provision of basic services (Adejumobi, 1999). Government ownership of infrastructure was therefore the rule rather than the exception, and this was more common in Africa than in any other part of the world (Mugerwa, 2003). In effect, governments in Africa became synonymous with the delivery of basic services.

Apart, from being manager of state owned enterprises, government also was expected to provide credible political leadership, and maintain law and order for the common good. All these activities demanded huge financial commitments from the government, and in the long run, public utilities suffered a great deal of underinvestment and became inefficient in service delivery. Other factors apart from underinvestment, which accounted for government inability to provide and guarantee people's access to quality and affordable basic services, were the problem of inadequate maintenance of facilities, lack of operational efficiency, undue politicization of public utilities, and exclusion of the poor (World Bank, 1994). The difficulties public utilities were confronted with in meeting their objectives of ensuring that services are available to all and which was exacerbated by the economic downturn of the 1980s and 90s, coupled with the rise of neo-liberal approach to service provision, resulted in the search for a new strategy to the provision of basic services (Olowu, 1999). All this development culminated in the state gradual withdrawal from the provision of services such as drinking water, and shifted responsibility of service provision to Non-State Actors (NSAs), which include profit and not-for-profit organisation, individuals and self-help groups.

In some countries in Africa, the involvement of the private sector was formal, "policy-driven". For example, Cote d'Ivoire, Niger, Ugandan, Mali, and

Tanzanian (see Nyarko, 2007). While in others, it was "needs-driven", people deciding to provide for themselves in the absence of government provision. The later is referred to in this paper as privatization by default. In some cases, the needs-driven privatization begins without government recognition, but as time goes by, it becomes institutionalized and gains state recognition, like in the case of peri-urban water provision in Dar el Salaam (Adraina, et al. 2006).

In Nigeria, the provision of water is considered to be the responsibility of the federal, state, and local governments. However, the deteriorating state of public utilities has resulted in a situation where public utilities are not able to meet the water needs of majority of the population, especially residents of low income areas in the urban centres. To address this problem some states in the country have formally engaged private water company in water provision. For example in Nasarawa state, a concession contract to distribute water to low income areas has been given to Riveroaks Utilities Ltd, a local water provider (Larbi, et al 2004, Larbi, 2006). Although, water provision is not formally privatized, in most of the states in Nigeria, there are different forms of private provision, which are largely unrecognized and their activities unregulated (ibid). Previous researches on water provision in Lagos (See Gandy, 2006, Hall 2006, Larbi, et al, 2004, Larbi, 2006), have mentioned the role state and NSAs play in water provision in Lagos, but they have not really explored the way these different channels of water provision are governed, and how these channels can be enabled for a better services provision that will lead to a positive public health outcomes and promote social and economic development.

This research paper focuses on water provision in Lagos. It explores the theoretical bases for state involvement in water provision, the historical antecedents leading to state withdrawal from provision of services, and the subsequent involvement of NSAs in water provision.

1.2 Problem statement

Water is essential to the well-being and survival of people. 189 countries came together in the year 2000 to adopt the Millennium Development Goals (MDGs) which set a time frame and quantifiable goals and targets in the fight against poverty, illiteracy, disease, hunger, environmental degradation and discrimination against women. Goal 7, target 10, of the MDGs, specifically aims at halving by 2015 the number of people without sustainable access to potable water (UNDP, 2003, UNDP, 2006). And the human right to water according to United Nations Committee on Economic, Social and Cultural Rights, gives everyone the right to access safe and affordable water. However, in many countries these rights are not respected (ibid). Access to water is still a major issue in most countries. The empirical statistics are staggering. For example, it is estimated that 1.1 billion people in the world lack access to the minimum required limit of 20 litres a day, and about 1.8 million children die each year from diarrhoea, a water-related disease (UNDP, 2006) Access to potable water plays a major role in improving public health and contributing to economic development. Accessibility to water and sanitation is still a major issue for many African countries including Nigeria. Table 1.1 below shows accessibility to water

in some African countries in the years 1990 and 2004. In Nigeria, only 49% and 48% of the population had access to improve water in the years 1990 and 2004 respectively.

Table1.1. Accessibility to improved water in some African countries

Country	% population with sustainable access to improved water	
	1990	2004
Cameroon	50	66
Sudan	64	70
Nigeria	49	48
Ghana	55	75
Kenya	45	61
Togo	50	52
Namibia	57	87
Uganda	44	60

Source: UNDP dataset, 2006.

Nigeria, particularly, faces big challenges in meeting the millennium development target for access to safe water. According to the data provided, the current annual water spending in Nigeria is put at $139.6million; whereas, water and sanitation sector finance needs for MDGs is $201 million, and this leaves a gap of $61.4million in annual spending on water (wateraid, 2006). And the annual diarrhoeal death among children less than five years is 150-200,000 (ibid).

There is a problem of access to potable water in Nigeria. Public utilities such as water corporations and electricity companies are failing in the provision of services at affordable and adequate quantity and quality. About 60-70% of the population has no access to water and sanitation (Hall, 2006). The inadequacy in public provision has driven people to devise different coping mechanisms, to access water. For example, 44% of households have their own boreholes, while a whole lot rely on water vendors and other NSA providers for their water need 'whose high prices amount to more than 30 percent of household income for the poorest (ibid: 3). Affordability could be a major problem for the poor, especially when viewed against the background of the poverty statistics provided by UNDP (2006). According to UNDP, in 1990-2004, the population of Nigerians leaving on less than $1 and $2 a day was 70.8% and 92.4% respectively.

In Lagos city, the Lagos State Water Corporation (LSWC) serves less than half of the entire population while the rest are served by NSAs. Out of estimated population of 15 million in the city, only 4 million have access to piped drinking water (Hall, 2006). This situation has led to the involvement of different private providers of water, such as water vendors, commercial boreholes operators, tankers, and sachet water producers, most of them unregulated. These alternative channels appear to offer a measure of relief to those not served by the public utilities in terms of ensuring that water is available. But this arrangement with regards to a basic service such as water raises a lot of questions. In the first place, multiple modalities of water provision require an

effective and well coordinated regulatory framework for the expected positive outcomes for water users to be realized. However, this becomes a matter of great concern when one takes into consideration the institutional weakness in Nigeria. The implication of lack of a well coordinated regulatory framework portends a grave danger for the users of water, who should be protected against exploitative tendencies such as arbitrary price increase, poor quality and unreliability of service.

1.3 Research Objectives

The objectives of this research are as follows: First, to find out how drinking water is provided in Lagos; to examine the actors involved in water provision and their mode of operations as far providing affordable water of adequate quality and quantity is concerned; their strengths and limitations in carrying out this role; and finally, to find out how the provision of water is regulated to ensure that the interests of all stakeholders are protected.

1.4 Research Question

How is potable drinking water provided in Lagos?

Sub-questions

- ◊ What is the role of government in water provision in Lagos?
- ◊ How are Non-State Actors involved in water provision in Lagos?
- ◊ What are the strengths and limitations of state and Non-State Actors in water provision in Lagos?
- ◊ How is water provision in Lagos governed or regulated?
- ◊ How do water users think about water providers?
- ◊ In which way does the market of water affect affordability by residents of low income areas in Lagos?

1.4 Relevance and Justification of Study

Access to safe drinking water is a major problem in many low and middle income countries. To address this problem, various strategies of water provision have been adopted in many countries, including many African countries. In Nigeria, a wide variety of water provisioning systems is in use especially now that the role of the state in basic services provision is shrinking. This development has provoked debates on whether or not an important good such as water should be left in the hands of NSAs, most of them operating without regulation. The failure of market has been used as justification for state involvement in water provision, but the failure of state has prompted call in some quarter for private provision of water. This research paper hopes to contribute to the on-going debates by critically examining the role state and NSAs play in water provision in Lagos.

1.5 Sources of Data and Collection Methods.

The data for this research were obtained from primary and secondary sources. The primary sources were got from personal experience, and using in-depth

interview with key informants involved in the water provision. The key informants include 2 selected officials of the LSWC, 1 official of the Lagos State Environmental protection Agency (LASEPA), and 1 official of the water resources department at the state ministry of environment. They were all purposively selected since they were considered as people who have the relevant information that is required for the study. Additionally, the Non-state actors were also purposively selected and interviewed. They include 3 tanker operators, 5 pushcart water vendors, 4 borehole owners, and 1 official of a sachet water producing company. Furthermore, users of water were also selected by purposive and quota sampling methods. The selection was done by categorizing Lagos, which is the research area, into high income, middle income and low income areas based on the categorization by Olayiwola et al (2006). 15 users were selected from each category and interviewed. The researcher used the above category to ascertain the situation of water provision in the different socio-economic areas and users' assessment of their major water providers.

The in-depth interview as a research instrument was selected based on the fact that its use created the chance for both the researcher and the respondents to have a productive conversation.

The semi-Structured interview was centred on government's role in water provision, the involvement of NSAs in water provision, regulation of water in Lagos, what water users think about water providers, and how the market of water affects affordability of water by low income earners in Lagos.

1.6 Limitations of Study

Accessibility to safe water has a lot of public health implications. Getting the epidemiological record to analyze for the quality of water was difficult. However, other case studies on water quality in Nigeria were used to fill in the gap. There was equally difficulty in getting to know the income level of the users' of water, which was needed to measure for affordability of water. Again, previous case study research on household income especially in the low income areas made up for this. Finally, most of the data were gleaned from secondary sources, and there could be some element of bias.

1.7 Organisation of the thesis

This paper is divided into five chapters. Following this introductory chapter, is chapter two, which discusses the theoretical and conceptual framework, and locates the topic in the literature. Chapter three provides background information on Lagos, and analyses the state role in water provision, both as a direct provider and as a regulator; the LSWC, which is the state utility responsible for water provision is examined. Chapter four explores the role of NSAs in water provision, the different types of NSAs, their management style, regulation; pricing and finally, it assessed their performance. Furthermore, it examines the demand and supply of water in Lagos. Chapter five, which is the last chapter, looks at governance without government in water provision in Lagos, and also provides the summary of findings, conclusion and recommendation.

Chapter 2: Conceptual Framework

2.1 Introduction

This chapter locates the study in the literature by exploring the following: the debates on the provision of public service and an exposition of the different theoretical positions; state withdrawal from basic services provision, the ideological underpinnings behind state withdrawal and how this has led to privatization by design, and in some cases, by default; the involvement of Non-State Actors (NSAs) in basic service provision; governance (regulation) of service providers; unbundling of service provision; and finally, governance without government (no coordination).

2.2 Provision of services.

Provision of service refers to the production and delivery of services such as potable water, health, education and electricity to the public. Basic services provision can be delivered, by the market, state and NSAs, popularly referred to as the third sector (see Awortwi, 2003). However, the neoclassical economic theory argues that service should be allocated through market forces. According, to this theory, the competition triggered by the market will offer consumers the best choices. But goods and services are not equitably allocated by the market. And besides, not all goods and services can be delivered through the market. For the neoclassical economic theory, only goods that have the characteristics of private good can be bought and sold in the market. Private goods are goods that are excludable (a person can be denied access if he cannot pay for it), and rivalrous in its consumption (consumption by one person can lead to less or no consumption for another) (Kaul, 1999).

Private Goods

Private goods are different from public goods. Private goods can be produced and delivered by the private sector. Private goods have the characteristics of subtractability and rivalry. Examples of private goods are bread, shirt, etc. It is possible to exclude users from consuming bread if they are not willing to pay for it. The consumption of a private good by one person diminishes the consumption by another; hence private goods are also rivalrous. There is no possibility for free-riding in the consumption of private goods. Private goods are commodified, that is they can be traded in the market (see McDonald and Ruiters, 2005)
In the context of water provision, it is possible to exclude someone who is not able to pay, by disconnection or cut supply to the person.

Public Goods

Public goods are goods whose allocation is not left to market forces. They are non-excludable and non-rivalrous in consumption and their supply is subject to market failure (Kaul, 1999). One market failure problem associated with the provision of public goods is externality (someone having to enjoy or bear the cost of the economic activity of another person). For example, underground water could be excessively used because it is regarded to be a “free good”. Other

market failure issues are “free-riding” and the “prisoner’s dilemma. Free-riding has to do with the consumption or enjoyment of services by those who are not willing or cannot pay for it. Prisoner’s dilemma on the other hand, refers to the lack of knowledge by both providers and clients to make good decision (Batley, 1996, Kaul 1999). Because of the above mentioned features, the provision of public goods is not an attractive venture for private providers. Hence, government has to be involved in their provision. Examples of public goods are street lighting, play park, defense etc.

Merit Goods

The third category of goods and services is the merit good. A merit good stands between private and public good. Merit good can be provided by the state as well as by the private sector. However, there will surely be under consumption of it if left entirely in the hands of the private sector (Roth, 1987, Batley, 1996). Hence, state should directly provide it or subsidize private sector provision. Merit goods have positive and negative externalities, access to them is very crucial to people’s wellbeing, and have positive impact on socio-economic development. Water is a quintessential example of a merit good. Access to safe water can reduce drastically incidence of water-related diseases (see UNDP, 2006). Nickson, (2002), noted that the merit good argument underscores the need for the state to ensure that access to water supply by all including the poor, is guaranteed for the sake of public health. This is also the argument of the rights-based approach to water provision, which sees water as a human right (see, WHO, 2003). But Roth, (1987), believes however, that externality issues associated with water supply require that machinery should be put in place that will encourage private sector participation in water provision. Such a system he identified as the granting of property rights.

It should be mentioned however, that the various classification of goods and services discussed above are technical classification. But at the end of the day what is regarded as private, public or merit goods and services is essentially a political decision. Helmsing (1997), noted that the boundaries between private and public goods are always shifting. One implication of such a political definition and shift is the question of whether or not access to certain goods and services be universalized.

The Market of water

The market of water helps to resolve the issue of allocating water among competing demands. Water is a vital resource with high social benefits, as result demand for it is always very high. In many low income and middle income countries, the demand for water far outstrips the capacity of public utility to supply everybody, particularly those in low income areas. Because of this shortage, other providers get attracted to the market. However, there are palpable fears in some quarters that the market of water will lead to inequitable access to this vital but scarce resource. It implies therefore that only those with most financial muscle can participate and benefit from the market of water because of the high transaction costs involved (see Zagarra, 2004). Besides,

there is also the problem of externalities associated with water market. However, it is believed that market of water can as well bring about efficiency gains, reduce externalities, and preclude the emergence of a dominant player in the market. But this is only possible if there is a low transaction cost and a functioning institutional framework (ibid).

Public Provision of Services

The provision of basic services has always been the exclusive responsibility of the state both in developed and developing countries. The dominant role played by the state was demonstrated in the way public services were financed, produced and delivered (Awortwi and Helmsing, 2007, Bakker 2002, Sijbesma and Van Dijk, 2006). The reasons for this dominant role of the government in basic services provision it is argued, has to do with their merit good characteristics and economies of scale associated with networked infrastructural services (World Bank, 2004). Align to this, government direct provision is based on the premise that state can guard against market failures in the allocation of basic services (see Batley, 1996). However, Adejumobi (1999), in his work "*privatization policy and delivery of social services in Africa: A Nigerian example*", gave a more nuanced view on the reasons for state central role in the provision of services. According to him, the delivery of basic services by government in African countries was driven by: (1) the state-led approach to social development, which was the dominant development paradigm after the end of colonial rule; and (2) the social welfare approach which captures the African culture and shared values. Because of this social welfare and state-led approaches, governments in African countries became involved in the provision of basic services such as water supply, electricity, health and education. Besides, government had additional duty also, to provide the right political leadership, law and order. All this responsibility increased the size of government and state budget, which led to the failure of state in basic services provision (World bank, 1997). Consequently, state utilities could only extend water to a tiny minority that was lucky to be connected to the network of pipes. The rest, mostly the poor could not benefit from state subsidized water provision (Ugaz, 2003). Apart from the size of government, a number of other factors also accounted for this failure, and this includes, over bureaucratization, corruption, underinvestment in infrastructure, lack of maintenance, and undue politicization of the operations of public infrastructure (Grindle, 2002, World bank, 1994).

Other reasons that have also been alluded to in the literature for the failure of public utilities are, the wave of economic crisis that swept across the developing world in the 1980s and 90s which culminated in the World bank imposed conditionality for structural adjustment programme (SAP), that recommended a shrink in the size of the state. The economic recession coupled with the neo-liberal ascendancy prepared the ground for state withdrawal from service provision, and resulted in the search for new approach to service delivery (Olowu, 1999).

2.3 State withdrawal from service provision

In Africa, the withdrawal of state from public service provision, as could be gleaned from the foregoing discussion, was driven by the parlous state of the economy, mismanagement of public utilities, and ideological underpinnings of SAP, which was packaged and delivered to developing countries. This development altered the approach to social and economic development, which shifted from state-led to market-led approach, and by implication, shifted the responsibility of basic services provision to the private sector. Adejumobi, (1999: 1) argued that this ideological shift and its attendant privatization policy have negative impact on 'allocative efficiency, social and class inequalities, access to the provision of those services and societal development'. This paradigm shift also affected the production and distribution of water. A wave of public sector reforms ensued. The end result of which was formal partnership arrangement for water supply. Example of such arrangement is private public partnership (PPP), driven by deliberate state policy. While in others, failure of public utilities forced people to take their destiny into their own hands, by devising different coping strategies to access water (privatization by default), and this resulted in multiple modalities of basic services delivery, whereby basic service provision was no longer provided solely by the state, but also, by market and not-for-profit organisation. (Awortwi, 2003). Nickson, cited in (Nickson, 2002) identified different PPP arrangements for non-state involvement in water supply to include service contract, management contract, lease contract, build-operate-transfer, concession contract, joint venture, cooperative and divestiture. The most popular type of PPP arrangement in Sub-Saharan Africa (SSA), he observes, is the management contract.

In Nigeria, some states have started implementing PPP in water supply. However in Lagos, the autonomy for water supply still rests with state utility which serves only 30% of the entire population, while the rest 70% is served by NSAs, most of them unrecognized and operate informally (Coker, 2004, Hall, 2006). In most developing countries, Batley (1996), observes, privatization by default happens faster than formal privatization. Studies have shown that the informal private providers though not legally recognized, serve up to 80% of the urban residents in developing countries (Collignon and Vezina 2000, Toro, 1999). Table 2.1 shows PPP implementation in some African countries.

Table 2.1PPP implementation in selected African Countries

Public Management	Public private partnership	
Kenya, Algeria, Tunisia, Libya, Egypt Ethiopia, Somalia.	In existence	Under preparation
	Tanzania, Mali Niger , Uganda, Guinea, Cote d'Ivoire	Ghana, Togo, Chad, Congo, Rwanda, Sierra Leone, Zaire

Source: Nyarko, 2007

There are two strong points from the discussion of state provision of public services. First, is the issue of market failure which warrants state intervention in basic services provision; second, is state failure, which justifies provision by the private sector. These are the arguments in the literature. The stand of this paper however, is that the state , either as a direct provider or a regulator, remains the only viable entity that can guarantee inclusive and equitable distribution of basic services if the right institutions are in place and if the political will is there. Similarly, Houtzarger argues that 'the territorially defined nation-state today remains the only actor able to attract the vast resources from society that makes possible significant distributive and redistributive policies and the only actor capable of providing public goods on significant scale' (2003:4). This assertion supports a dominant role for the state in providing basic services. In the researcher's view, this dominant role can only make sense if there is efficiency in the management of public utilities in such a way that services are provided at affordable quantity and quality to all, and promote social and economic development. But the evidence in the literature points to the fact that the state has failed in doing this. State failure in service provision is suitably captured by Khan's definition of state failure. State failure in service delivery according to Khan (2002) consists of errors of 'omission, when state does not do what it is supposed to do to promote economic development, and errors of 'commission', when the state does things that reduce economic development. In my view, failure of the state to give recognition to NSAs providers of water for example, is tantamount to errors of 'omission' and 'commission'

2.4 Involvement of Non-State Actors (NSA)

The NSAs in urban water supply can be grouped under small, medium and international enterprises. Nickson (2002), classified them into two sub-sectors: the global multinational corporations such as, Ondeo and Vivendi; and the other group includes water vendors, community groups, water tankers and other small-scale providers of water. Non-State actors are seen to have an edge over public utilities in terms of efficiency, effectiveness and responsiveness to users' demand (Solo, 1999). However, Grindle argued, that they should not be seen as a replacement for failing public sector provision, as they also face substantial challenges (2002). She went further to identify some of these challenges which include, problem of scale, technical, logistical and managerial problems (ibid). These are supply side problems associated with NSAs providers. There is also the demand side dimension of the problems. Quality and pricing are commonly referred to in the literature as the problems associated with NSA providers, especially the informal providers (Collignon and Vezina, 2000, Komives, 2001, Larbi, 2006, Nickson, 2002). For instance, Collignon and Vezina found out in their study of water supply in ten African cities, that the NSA tend to get together by forming an association which does not only work against open competition, but leads to arbitrary price fixing which is harmful to consumers interest. Similarly, the work of Larbi (2006) on non-state involvement in water supply in Nigeria confirms this assertion

But Solo (1999), has a different view about NSAs in water supply. She argues that small-scale providers of water tend to offer good quality and low prices, and that they have better public relations with customers than the public sector (ibid). This paper supports the later argument but disagrees with the former. The reality is that state subsidized water cannot be more expensive than privately provided water whose primary motive is profit maximization. Contrary to the argument of Solo, however, the quality of water delivered by non-state providers is poor compared to public sector-provided water. A study conducted by Owuama and Uzoije (2005), on waste disposal and ground water quality in Owerri, Nigeria, showed that dissolved solid and bacterial in ground water such as boreholes exceed the maximum level required for drinking water. And in Lagos one major cause of disease is the consumption of contaminated water (Gandy, 2005). It is argued that the relationship between quality of drinking water and diseases such as diarrhea and cholera, which are water-related, is hard to establish as there could be other causal factors (Jensen et al, 2004). Nevertheless, it was established that faecal contamination of water was most likely to occur between source and point-of-use, and also through household water storage system (Wright et al, 2004). Whatever are the different positions regarding the relationship between the quality of water and health, the fact remains that these twin problems of pricing and quality associated with NSAs involvement in water supply, place a compelling demand on the government to be proactive in its regulatory role. Regulation is one of the governance elements of multiple modalities of service provision.

The term governance is used differently and has different connotations (Peters and Pierre, Rhodes, 1996, 1998, Stoker, 1998). The Commission on Global Governance cited in (Awortwi, 2003), defined governance as the sum of the many ways individuals, institutions, public and private, manage their common affairs. Rhodes (1996:652), stipulated that governance refers to 'self organizing, interorganisation networks'. He argues that these self organizing networks complement the effort of state and markets in the allocation of resources, administration of control and coordination in service delivery. This conception of governance is also reflected in Stoker's five propositions of governance (1998). One of the propositions of Stoker is that governance recognizes the capacity to get things done which does not rest on the power of government to command or use its authority. It sees government as able to use new tools and techniques to steer and guide. This proposition emphasizes the very crucial role the government plays in regulating the provision of basic services. The involvement of different actors in water supply, and the merit good characteristics of water, as noted already, beckons on government to perform the good role of regulating, facilitating and coordinating, in order to ensure adequate, safe and affordable water delivery. Furthermore, regulation is useful to forestall a situation where providers may be concerned only with the pursuit of their business interests to the detriment of the overall interests of users (ibid).

The role of the regulator in water includes licensing operators, price fixing, monitoring performance, quality check, and administering sanctions on those who do not abide by the rules (Nickson, 2002). Regulation can prevent the

tendency for anarchy to set into water provision and ensures accountability of service providers. For Rosenau, there is anarchy when there is 'lack of patterned rule, a tendency for actors to go their separate ways without regard for common principles, rules and procedures' (1992:7).But sadly, in many developing countries, regulation which is a fundamental component of governance is very weak. Regulatory bodies set up by the state are weakened by factors such as, political interference, lack of independence, shortage of competent manpower, lack of coordination among other drawbacks (Clarke et al., 2002, Nickson, 2002). It is against this backdrop, that it has been argued, that for there to be an effective regulation, the regulatory institution must be independent not only in the way they are financed, but also in staff recruitment (Awortwi, 2003, Nickson, 2002). It is feared that when regulatory bodies depend on finances from the government, they might be subjected to unnecessary control by politicians and lose their autonomy. Independence of the regulator as defined by Smith (1997), cited in Awortwi (2003), means, non-interference by consumers and other private interests, non-interference by government, and independent source of finance. However, World Bank (1994), opined that when other actors, particularly the consumers are involved in regulatory activities, regulation can be more effective. This position of the World Bank may be a hard recipe to recommend in developing countries where people lack the political clout to really exercise their agency, and where their rights may not be adequately protected.

2.6 Unbundling of water service provision

Unbundling of infrastructure is a form governance of service provision introduced by the World Bank to promote and enhance efficiency, effectiveness, and quality of service delivery (World Bank, 1994). Unbundling refers to the splitting of the whole chain of service provision into separate units, i.e., separation of functions that are interrelated. Unbundling takes away the natural monopoly of an enterprise and encourage private sector involvement in the main activities of public utility, stirs up competition and consequently, promoting efficiency in service delivery (ibid). Besides, unbundling is considered necessary because it ensures cross-subsidies between different units of a business, promotes accountability on the part of management and makes delivery of subsidized services to the poor more realistic (World Bank, 1994). It is argued that unbundling removes the need for regulation, because the competition for the market which unbundling promotes, pushes service providers to be more efficient, effective and more responsive to consumers needs (Kessides, 2004). The counter argument to this claim is found in the market failure theory. For example, service providers might be unwilling to serve low income areas by carving a niche for themselves in the market and serve only well off areas in the society. In the context of developing countries, it is feared that unbundling might not bring about any appreciable gains because the size of market is small and the infrastructure are not well developed (ibid). If this is correct, it could be argued that the level of decadence infrastructure has witnessed in many developing countries as explained earlier makes them unattractive to private

investors. Furthermore, it has been observed that unbundling does not only increase the cost of coordinating unbundled activities that are strongly interdependent, but, can as well, result to inefficient coordination. And the opposite holds for weakly interdependent activities (Van der Wel, 2004). In the case of water sector for example, unbundling demands that activities such as policy making, construction, production, distribution, pipe laying, billing and quality check are performed differently by separate bodies. In most developing countries notwithstanding, all these activities are performed exclusively by the state utilities, and yet coordination and regulation is weak. Coordination becomes more of an issue in a situation where there are different channels of services delivery. Unbundling is not circumscribed only to public utilities; there is also separation of functions among non-state providers of services in many developing countries. Toro (1999) observed that among small-scale providers of water in developing countries, there are elements of unbundling in the way they operate.

Table 2.2. Unbundling of water service provision

Chain	Federal Government	State government	Local Government	Private sector
Policy Making	X			
Production		X	X	X
Distribution		X	X	X
Quality Check	X	X		
Billing		X	X	X

Table 2.2 above is a conceptual description of the unbundling of water service provision.

2.7 Governance without government

Rosenau (1992: 3-6)) has differentiated between governance and government. According to him, government refers to 'activities that are backed by formal authority' while governance goes beyond government. Governance includes both formal organisation and informal, non-state activities (ibid). However, there is governance without government. For Rosenau, when you get a situation where regulation of activities such as service provision, are done outside the realm of a formal authority, then you have governance without government (ibid). In the water supply sector, governance without government is played out when there is lack of centrally-controlled coordination and regulation of different water providers, and so much so that regulatory activities are carried out by service providers themselves. When government lacks the capacity to carry out effective regulatory activities according to Rosenau, means weak governance. Weak governance however, does not mean that government does not exist, but, it is simply inefficient, and this is quite different from anarchy where there is no adherence to hierarchy or patterned rule of doing things. Governance without government is amply described by Rhodes (1996:660), when he refers to governance as 'self-organizing interorganisation networks'. This means self-

governing and self-controlled networks (ibid). In the water supply sector, NSAs could organize together as a union which might assume the role of regulation, with the specific task to monitor and control activities of members. In some cases they may come together in order to restrict others from coming into the market (Collignon and Vezina, 2000). There is governance without government when all these activities take place outside the domain of government.

Conclusion

This section has tried to locate the topic in the literature by discussing the main concepts. It examined the differences between public goods, private goods and merit goods. Water is a merit good because it stands between private good and public goods. Merit good can be provided by state as well as NSAs. It has also evidently discussed state provision of social services, reasons for state provision, and the antecedents leading to state withdrawal from basic services in Africa. Furthermore, the involvement of NSAs in basic service provision and the need for regulation of multiple modalities of service provision were examined. Unbundling, which is a governance approach to infrastructural service introduced by the World Bank, and governance without governance (lack of coordination) of service providers were also explained.

Chapter 3: Water Provision in Lagos.

3.1 Introduction

This chapter will present the background of the case study and different sources of drinking water in Lagos. In addition, it will examine the role of government in water provision in Lagos, focusing particularly on the direct provision by Lagos State Water Corporation (LSWC), and a critical evaluation of the role of the state with regard to providing policy and regulatory frameworks. The spotlights will be on the capacity of LSWC, how it performs the different roles on the service provision chain with respect to the concept of unbundling, and challenges faced by LSWC

3.2 Background of Case Study

Lagos is located in the Southwestern Coast of Nigeria. It is the most populous city in Nigeria. It has an estimated population of 9,013,534, and an area of approximately 300 sq km (Census, 2006). The rate of population growth is about 4% or 600,000 per annum, and has a population density of around 41,193 persons per sq km (ibid). According to the UN prediction, the population of Lagos will reach 17 million by the year 2015 (see Gandy, 2006). However, Lagos state government put the current population at about 15 million.

In Lagos metropolis, residential areas differ broadly in terms of population and densities. For example, Ikoyi, has a total population of 684,105, and a population density of 1,496 inhabitants per square kilometers; Surulere, has a total population of 503,975, and a population density of 21, 912 inhabitants per square kilometers; while Ajegunle, has a total population of 684,105, and a population density of 55,474 inhabitants per square kilometer (Census, 2006). Lagos has the enviable status of being the industrial, commercial, and financial nerve centre of Nigeria. This unique characteristic makes it attract continuous influx of people from other parts of the country, who come mostly in search for jobs. And most of these migrants are absolved in the informal sector of the economy (Agboola, 2007).

The average incomes in Lagos are put at less than US$1 a day (Gandy, 2006). Lagos grapples with shortage of infrastructure such as electricity, water and sanitation, transport and so on. The supply of these basic services is unacceptably low compared with the population. In the area of water supply only a fraction of the population is connected to pipe water provided by the state utility. It is estimated that only 30% of the entire population of Lagos are served by the state water corporation, and the rest 70% gets their supply from sources, such as water vendors, tanker truck operators, boreholes, wells (Coker, 2004). Sewerage network is almost not available and most of the childhood disease is said to be caused by insufficient access to safe drinking water (Gandy, 2006).

3.3 Sources of drinking water in Lagos

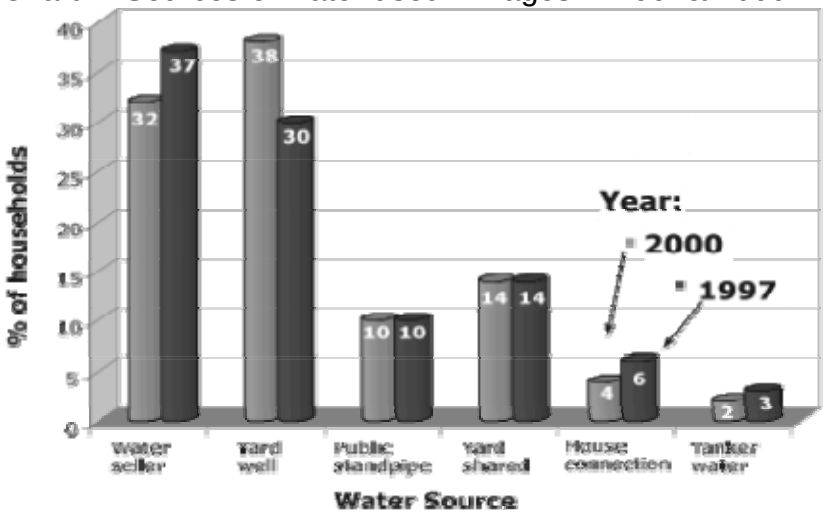
There are different kinds of water provision sources in Lagos. People get their water supply from sources such as pipe/tap, borehole, well, river, rain water collection etc. Pipe water and borehole are the potable sources of water. The quality of water from other sources is not safe. In Lagos, residents of rich neighbourhoods have access to in-house water provision, while the poor neighbourhoods and new areas of the city have to rely on other alternative water providers. Table 3.1 below shows the different sources of drinking water in Lagos.

Table 3.1Sources of Drinking water provision in Lagos.

Potable sources of drinking water	Unimproved sources of drinking water
➢ In-house piped water ➢ Yard tap ➢ Borehole ➢ Protected dug well ➢ Protected spring ➢ Rain water collection ➢ Bottled /sachet water.	➢ Unprotected dug well ➢ Unprotected spring ➢ Vendor- delivered water ➢ Tanker truck water

Source: Adapted from Okioga, 2007 with modifications.

Chart 1. Sources of water used in Lagos in 1997& 2000



Source: http://www.stoveco.com/Lagos

The chart above is a graphic description of the different sources of water used in the year 1997 and 2000, and the percentage of household who got their water from the various sources. It shows that majority of people got their water supply from water vendors and from well water or borehole water. While very small percentage of people got their water supply from pipe water. This shows the insufficiency of public sector provision. Recent studies show that there have been no significant changes in the situation since then (see Larbi, 2004, Hall, 2006).

3.4 Government provision of water

In Nigeria, about 70% of the population has no access to safe water and sanitation. Those who get pipe water receive their supply from state owned water corporations, whose services are more often than not erratic (Hall, 2006). In Lagos the LSWC has the monopoly and responsibility of providing water of adequate quality and quantity to the residents of the city, while the ministry of rural development is responsible for rural water supply. According to the LSWC laws, cap 55, laws of Lagos state (2003), LSWC is mandated to supply potable water to the entire population. However, in reality, LSWC has not been able to live up to this mandate. For example, LSWC can only serve 30% of the people of Lagos, while the remaining 70%, are served by non-state actors (Coker, 2004).

Water by its nature as a merit good, demands that government plays a crucial role in its provision and sustainability, so that people can at least meet the minimum 20 liters of water required per person per day (see UNDP, 2006). Government can play this role in two ways: by direct provisioning, and through regulation and coordination of private providers. Now let's look at the role of government in water provision in the Lagos context.

Direct provision by state (LSWC)

In Lagos, state provision of water is carried out by the state water corporation, the LSWC as earlier mentioned. Since LSWC is a major player in the water supply sector in Lagos, it becomes relevant to describe the way LSWC performs the different roles involved in water supply chain. And these roles have to do with pipe laying, construction, billing, maintenance and distribution.

Pipe laying and construction of water works These are all done by ad hoc contracts. For example, the construction of water works, laying of primary trunk mails, laying and supply of tertiary pipe networks, construction of anti-salinity weir and rehabilitation of water treatment plants.

Billing This is another important component of water supply chain. Billing is contracted out to a private company which is responsible for the production of the bills for the LSWC. But the tasks of sending bills to the different clients and revenue collection are done by LSWC.

Maintenance is done in-house by the technical department of the Corporation. All repair works are done by the technical staffs of the LSWC, who are attached to all the departments, especially water works, where round the clock maintenance of all the equipments is carried out to ensure uninterrupted water supply.

Quality Control: In the aspect of quality control, LSWC has a regulatory department which ensures that water is subjected to laboratory test to meet the WHO and European standards for drinking water (Olaisebikan, 1999).

Distribution: LSWC does not share the distribution of water with any other entity. The distribution department ensures that the bulk of water produced is

supplied to the people. To facilitate the process of water distribution, the LSWC through its decentralization policy established zonal offices to make sure that the bulk of water produced gets to the people. Distribution is done through transportation of water in pipes to prevent contamination. It must however be mentioned that in the proposed privatization of Lagos water corporation, there is a plan by the LSWC to unbundle its distribution into ten different water supply sections; each will be leased to private operators to supply water to consumers (LSWC).

Despite all this arrangement, LSWC can only meet the water demand of a tiny number of people in the city, just about 30%. It is against this setting that this paper will delve into an assessment of LSWC. The assessment is based on the annual reports of LSWC which cover a period from 1997-2000. Others covered between 1985 and 2005.The indicators that have been used for this assessment are: water production capacity and water demand, water supply sources, capital investment and revenue collection efficiency.

Production Capacity

Lagos state water corporation at its current level of production cannot meet with water demand of the population. Tables 3.2 and 3.3 below show the production capacity of LSWC, population and water demand in Lagos.

Table 3.2. Production Capacity of LSWC by year 2007

Waterworks	Capacity	
Adiyan waterworks	318,181.82 m3/day	70mgd
Iju waterworks	689,272.04 m3/day	45mgd
Ishasi waterworks	18,181.8 m3/day	4mgd
Mini waterworks	130,181.8 m3/day	28.64mgd
Micro waterworks	1,818.81 m3/day	4mgd
Total	689, 272.04 m3/d	151.64mg

Source: LSWC, 2007

Table 3.3. Projected popn/ water Demand in Lagos

Year	Projected population (millions)	Water Demand * (mgd)
1985	6	160
1990	8	199
1995	10	256
2000	12	294
2005	15	332
2010	19	375
2015	24	424

Source: LSWC Reports, 2001

* Million Gallons per Day.

Tables 3.2 and 3.3 above, show that water demand in Lagos far exceeds the production capacity of LWSC. The total production capacity of all the water works put together stands at 151.64 (mgd) in 2007. Whereas, the total water demands in the year 1985, was more than the production capacity of LSWC in the year 2007. By the year 2005, water demand in Lagos was 332 (mgd). The situation reflects the low coverage of LSWC. LSWC has 3 major, 10 mini and 7 micro water works, yet it can only provide water for 30% of the entire population of Lagos. And with the projected population growth rate of 4% annually, the demand for water is set to double to over 2,000 million litres or 440 million gallons per day by the year 2020 (LSWC).

A number of factors account for this low coverage. At present, only half of the water produced is accounted for. There is also the problem of capacity underutilization. Production is just half of installed capacity because of insufficient supply of electricity (ibid). Another reason for this is on the demand side, only 40% of water produced is actually paid for by the consumer. There are also problems of leakages as a result of irregular maintenance, illegal connections, and water "bunkering". The population of Lagos which has continued to rise has also made coverage a huge challenge to LSWC. From a humble population of 1million in 1960, the population has gone to about 15 million in 2006 (National Population Commission, 2006).

Table 3.4: LSWC water supply sources (annual average)

Source	Designed capacity MGD	2000		1999		1998		1997	
		MGD	Capacity utilized	MGD	Capacity utilized	MGD	Capacity utilized	MGD	Capacity utilized
Reservoir	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
River intake	124.00	77.90	62.82%	70.50	57.18%	93.26	73.21%	79.30	83.95%
Ground water	47.36	7.11	15.01%	7.16	15.11%	4.07	12.82%	8.06	17.02%
Total abstraction	171.36	85.01	49.61%	76.06	45.55%	99.33	57.97%	87.36	50.90%

Source: LSWC Reports, 2001

Table 3.3 above shows the true picture of water supply sources of LSWC. The various sources are reservoir, river, and ground water or borehole. In the aspect of water abstraction as indicated in the table, the LSWC also grapples with capacity under utilization. From 1997 to 2000, the annual average capacity utilized of the water sources have been fluctuating between 50.90% and 49.61%. This fluctuation, added to the problems earlier mentioned possibly explains the shortfall in public water supply in Lagos. The huge deficit in infrastructural investment also could be a major factor militating in insufficient water supply.

Capital Investment

Table 3.5. Investment/ Expenditure of LSWC (1997-2000)

Investment Expenditure	2000 (N'000)	1999 (N'000)	1998 (N'000)	1997 (N'000)
Production and Treatment	10,358	5,933	128,852	32,218
Distribution	3,000	-	201,611	31,803
Operational support	11,100	5,266	8,097	2,185
Others	-	-	-	-
Capital works in progress	-	98,832	325, 635	2,088,289
Total	24,458	110,031	664,195	2154,495

Source: LSWC Reports, 2001

Public water production and distribution is a highly capital intensive venture that demands continued and substantial investment. Table 3.5 above, shows the direction of investment and expenditure of LSWC. Distribution, which is the major channel by which water gets to the end users, has witnessed unstable investment. In the year 1997, 98, and 2000, investment in distribution was 31.8million naira, 201.6million naira, and 3,000million respectively. In the year 1999, there was no record of any investment on distribution. On the whole, the total investment/expenditure has experienced a downward slide from 1997 to 2000. If this trend continues, it will become increasingly critical for LSWC to be able to meet with the current and future demand for water by the inhabitants of Lagos. According the World Bank report on the Lagos urban water project, large investment will be needed by LSWC to be able to increase its present level of coverage. It is roughly estimated that it will cost LSWC US$400million to achieve 50% coverage by the year 2010 and another US$600million will be required to maintain this level of coverage up to 2020; to reach 75% coverage, US$1billion will be needed plus US1billion to maintain this coverage level till 2020.

Revenue Collection

Considering the shortfall in bill collection efficiency, and plummeting revenue of LSWC, increasing coverage of water supply in Lagos will remain a daunting task. Table3.6 below shows that the current revenue accruing to LSWC has been dwindling. After revenue stagnated at 12% for the years 2000 and 2003, it increased slightly to 20% in 2007. However, it is projected to increase to 50% and 75% for the years 2020 and 2025 respectively. This projection might not be realistic because of poor bill collection efficiency of the LSWC. According to the LSWC, the collection efficiency for metered customers is 23.6% and 20.5% for flat rate customers. Out of 110,000 bills that are sent out quarterly, only about 35,000 are making partial or full payment.

In terms of market coverage, there is even no hope for optimism in the future that LSWC will be able to serve all in Lagos city. For example, the market coverage in the year 2000 was put at 40%, 50% for the year 2007, and 75% for the year 2020, in actual fact at the moment; LSWC only covers 30% of the market of water provision in Lagos. The LSWC does not only need to increase its production capacity, it has to also improve on its distribution efficiency, reduce

the level of unaccounted for water (UFW), which is put currently at 55%(LSWC), to meet the water needs of the growing population of Lagos.

Table 3.6 Historical, Current and Projected Water Revenues for LSWC (2000-2025)

	2000	2003	2007	2020	2025
Annual value of water supply(N'm)	4,879.32	7,855.10	12,824.17	53,397.19	78,069.12
Annual Revenue from water supply(N'm	**600.17**	**927.34**	**2,564.83**	**26,698.60**	**58,551.84**
Supply/Demand (%)	40%	45%	50%	75%	80%
Revenue/Value of water supplied (%)	12%	12%	20%	50%	75%
Market Coverage	40%	45%	50%	75%	80%
Lagos' population (millions)	12.5	15.0	17.4	23.0	25.0
Consumption (litres per person/day	30	32	36	51	60
Total consumption (litres per day**)**	375	477	631	1,167	1,500
Supply (litres per day)	150	215	315	875	1,200

Source: Hall, 2006

Policy and regulatory frameworks: A critical evaluation of state role.

Providing policy framework In Nigeria, the responsibility for water delivery is shared by the three levels of government: federal, state, and local government. The federal government through the federal ministry of water resources is responsible for making and coordinating national water policies, the state governments are each responsible for water supply through their various public utilities. In some states, rural water supply is the responsibility of local government, while in others this responsibility rests on the state ministry of rural development.

The national Water Supply and Sanitation policy (NWSSP) is a document of the federal government of Nigeria which is binding on the 36 states in the federation. All the states are by implication, duty bound to implement this policy in their respective jurisdictions. The objectives of the NWSSP according to the federal ministry of water resources (2000) are as follows:

1. To increase accessibility to water supply and sanitation in the whole country in order to meet the level of the socio-economic demand of the nation;
2. To ensure that citizens are able to afford water supply and sanitation provision;
3. Ensure that providers of water maintain high quality standards;

4. Guarantee affordable access to water and basic human needs for the poor;
5. Privatization of water supply where feasible and provide social safety net to protect the poor;
6. Enhance national capacity in operation and management of water supply and sanitation undertaking;
7. Monitor the performance of the sector for sound policy adjustment and development for water supply and sanitation;
8. Legislations, regulations, standards and laws for water supply and sanitation; and
9. Reform of water supply and sanitation sector to attain and maintain internationally acceptable standards.

The issues of coverage, affordability, regulation, and ensuring access to water by the poor are well captured and couched in the NWSSP. However, almost a decade down the line, the reality on the ground shows that in Lagos state, not much has been achieved in meeting these objectives. This obviously demonstrates that there is a gap between policy and practice. There is still no adequate coverage by the LSWC in water supply; there is weak regulation of non-state providers and no adequate protection for poor

To begin with, the NWSSP is a top down supply-driven approach to water accessibility, prepared by the central government without inputs from the different stakeholders in the water sector, and there is no detailed plan on how the policy will be implemented. There is no appropriate implementation strategy of the NWSSP, the case of water provision in Lagos attests to this fact. Because it reveals a gap between what is written on paper, and what actually takes place on the ground. Since the state governments have the responsibility to provide water, it will be better for the states to equally take responsibility for policy formulation instead of the present situation where the federal government is the only authority designing policy framework for water provision for the whole country. The policy ignores the demand-side management of water provision. There are no mechanisms for water conservation, such as wastage control and the recycling of waste water. Even the participation of water users in decisions over water supply and demand is ignored by the policy. They are, in the view of this paper, seen as a perceive recipients of government policies and programmes.

The policy talks about guaranteeing affordable access to water and basic human needs for the poor. But then basic human needs are more often than not a political abstraction. The NWSSP also aims to privatize water where feasible and social safety net for the poor. Although the objective is clear in terms of guaranteeing access to vulnerable groups, but the lack of commitment to the adequate implementation of the NWSSP, raises doubt as to whether this pro-poor objective will be realistic. Besides, it sees water as a commodity that can be traded in the market. There is a need for government to reconcile the apparent contradictions of adopting market principle in water allocation and at the same time meeting social goals.

The study of water provision in Lagos showed that the NSAs play very useful role. But unfortunately, in the NWSSP, they are not recognized as one of the stake holders in water provision. For there to be effective water provision of

adequate quality and quantity, there is a need for extensive and more inclusive policy framework that recognizes and legitimizes the role of NSAs, and other players in the water provision sector, including users.

Providing Regulatory Framework. Apart from providing policy framework for water provision, another vital role government plays in water provision is to provide a regulatory framework. Regulatory framework encompasses the regulation and coordination of water providers. Issues of Price, quality and quantity are the main areas that fall under the purview of regulatory framework. All this is geared towards promoting efficiency in service delivery, adhering to quality standards, ensuring that providers are responsive to users' needs, control of externalities, maintain public good function, safety net regulation, and ensure water can be used efficiently (Rees, 1998, cited in Mitlin, 2003). A number of agencies at the state and federal levels are involved in water regulatory activities. At the federal level are the Standards Organisation of Nigeria (SON), National Agency for Food and Drugs Administration and Control (NAFDAC). In Lagos state, the Lagos State Environmental Protection Agency (LASEPA) is the state regulatory body on water quality. It has the power to regulate surface and underground water in addition to regulating water quality (see, Deloitte, Touche Tohmatsu, 2000)

According to SON (2007), the following laws provide the regulatory framework for drinking water quality in Nigeria: Consumer protection council Act 66(1992); Federal Environmental protection Agency- retained as cap 131; Council from regulation of engineering in Nigeria Act 55(1972); Public health Act (1958); Water resources Act No. 101(1993); Nigeria industrial Standards for Natural and Mineral water (NIS: 2003).

The Standards organisation of Nigeria (SON) is responsible for setting drinking water standards in Nigeria. The standards set by SON applies to drinking water supplied by state water corporations; community-managed water; water supplied by vendors and tankers; privately owned water arrangement; drinking water used in private and public establishments. While the amended NAFDAC decree 19 of 1999, mandates NAFDAC to among others, regulate and control the production and sale of bottled and sachet water in Nigeria. All these laws are intended to guarantee safety on drinking water and protect public health.

In the area of economic regulation, LSWC has the power under the LSWC Edict, No.25, 1986, to fix rates for water supply in the state with the approval of the Commissioner (See Deloitte Touche Tohmatsu, 2000). Under the Edict, LSWC must give permission before anyone can abstract water in the state.

3.5 Assessment of the Role of the state in water provision.

The users' assessment of the role of state in water provision is divided into the supply and demand issues. In terms of supply, respondents complain bitterly of the irregular supply of water. Some mentioned that, water flows from the taps once or twice weekly. And to make for the shortages they had to resort to buying

water from vendors anytime the water from the tap stopped flowing. Complaints about irregular supply of water respondents hinted are in most cases not handled. On the issue of billing, which is an aspect of the demand side management, the LSWC, is also not effective, monthly bill, some of the respondents hinted, do not come as at when due. In addition, Issues such as wrong billing, abandoned bills by prior users, low pressure, burst pipes and leakages were not promptly dealt with. The Lukewarm handling of these demand and supply issues can lead to shortages in water provision. However, on the positive side, users tend to be satisfied with the price of state-provided water, which is obviously lower than prices of other alternative providers of water. For example as we shall see later in this paper, those who get water from public utilities pay 50 naira per cubic meter as compared to 400 naira paid by users who get water from NSAs for the same volume of water.

On the whole, the performance of LSWC when measured by the criteria of effectiveness, equity and efficiency, is not very encouraging. In the aspect of effectiveness, LSWC only supply water to 30% of the population while the rest 70 % is covered by NSAs. The reason for this low coverage is low revenue, inadequate investment in distribution, lack of regular supply of electricity, capacity underutilization, and inability to control leakages in the system which results to huge UFW.

There is no universal access to water in Lagos, despite the fact that LSWC laws, cap 55, Laws of Lagos state, 2003, makes it explicitly clear that it is the responsibility of LSWC to provide water to the entire population. Furthermore, residents of low income neighbourhoods have been unacceptably neglected in the public sector water provision. Poor neighbourhoods are not yet connected to the network of pipes, and they end up paying more to access water than residents of high income areas who have access to state-subsidized water supply. In effect, the poor do not benefit from the low flat rate charged by LSWC which is ostensibly intended to take care of the poor. Although, those connected to pipe water do not get regular supply, but the point to be made here is that in terms of equity and pro-poor standard, state provision has lagged seriously behind. Those who get their supply from NSAs, pay more for water than those served by public utility. This clearly contradicts one of the objectives of the NWSSP, which is to guarantee affordable access to water and basic human needs for the poor.

In the area of bill collection efficiency, the performance of public sector provision is low. A number of factors are identified for this low bill collection efficiency, they include lack of metering system to manage water consumption and reduce wastage, public reluctance to pay for government provided water, and low tariff. Undue political interference in the running of the public utilities also contributed to low performance of the public sector provision. For example, in the aspect of personnel recruitment, the LSWC does not get the free hand to do a competitive recruitment. As one official of the LSWC hinted, albeit, the state government currently placed embargo on employment, but politicians still go about recruiting their cronies through the backdoor. The consequence of such clientelist

behaviour is a dubious process of recruitment which could lead to employing those not competent enough to do the job.

Regulatory role of the state with regards to water provision in Lagos is fraught with a lot of inefficiencies. Different bodies are involved in the regulation of water supply in Lagos, and this instead of strengthening regulatory activities, has rather weakened it. Roles and responsibilities are duplicated and are not properly defined. For example, NAFDAC, LASEPA and LSWC, all are involved in the regulation of water provision. They operate differently without any synergy or coordination between them, instead their roles conflict. There is absence of an organized and centrally controlled regulatory body. Besides, all the regulatory agencies are set up and financed by the government, and they are by implication not totally free from political control. This does not augur well for an adequate regulatory strategy.

Conclusion

There are different sources and form of water provision in Lagos. Government provides directly to a fraction of the population, and the rest get water through NSAs.

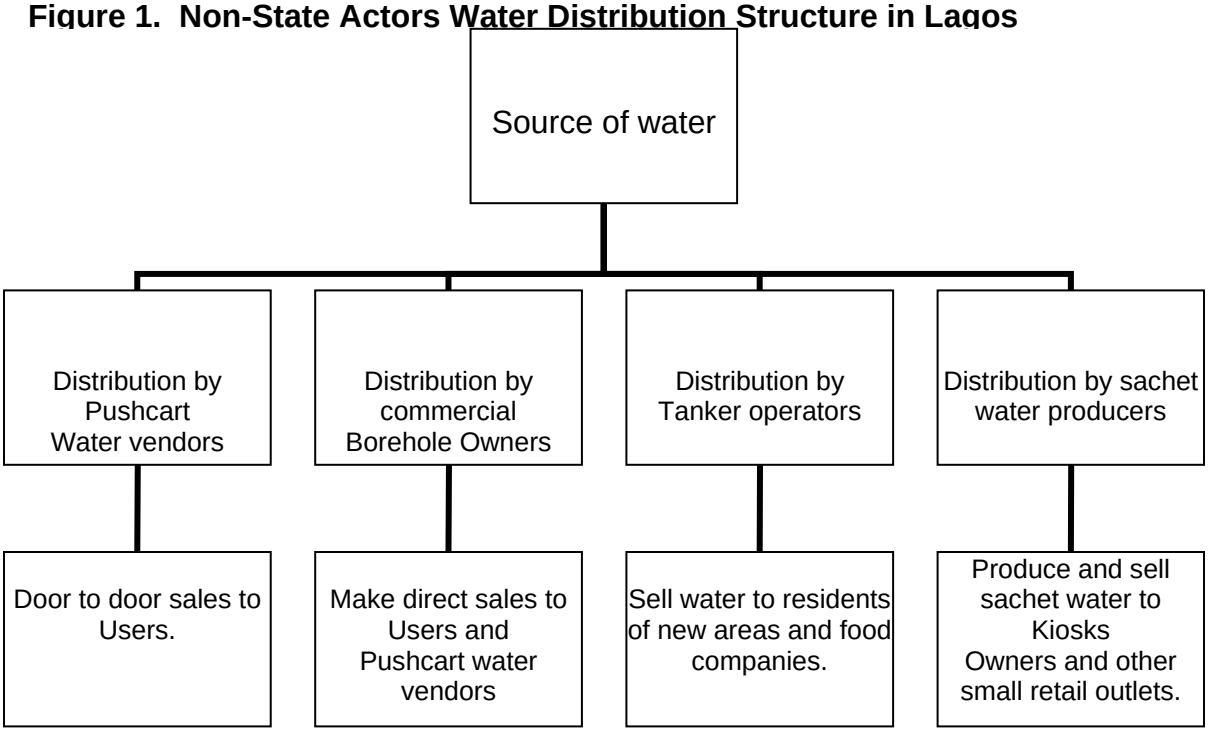
The argument for state role in the provision of water is anchored on the merit good nature of water, equity principle, and to correct market failures in order to achieve social goals. Apart from the direct provider role, state also plays regulatory role. That is, it regulates itself and other providers of water. In the context of water provision in Lagos, the study has revealed that state has withdrawn or failed in discharging these core responsibilities. In the aspect of direct provision, the state coverage is abysmally low, water supply is erratic, and there is no equity in water accessibility as majority of the people gets their water supply from NSAs. Bill collection efficiency is poor, there is high percentage of UFW, revenue is low, and investment on water production and distribution has taken a downward slide. In addition to all this pitfalls, are the issues of political interference in the running of the state utility, and the unreliable supply of electricity needed to pump water for onward distribution to users. The combination of all these factors has crippled the LSWC and reduced its capacity to meet with the high demand for water by Lagos residents.

Chapter 4: Role of Non-State Actors (NSA) in water provision in Lagos

4.0 Introduction

Non-State Actors are those alternative water providers who are involved in private provision of water. Private provision of water simply refers to the production and distribution of water by the private sector (Roth, 1987). The NSAs are popular providers of water in low income neighbourhoods of urban centres in many developing countries, where there is no state provision. They also offer services to areas that are connected to network of pipe water but not sufficiently served, and this gives them more share of the water market in low income areas (Komives, 2001, Toro, 1999, Sansom, 2006, Collignon and Vezina, 2000). Examples of NSAs in the water sector are, water vendors, water tanker operators, commercial borehole operators, and sachet water producers. In Lagos, the NSAs play important but unrecognized role in water provision. For example, NSAs account for about 70% of the water distributed and sold in Lagos (Coker, 2004). This chapter will present the different categories of NSAs involved in water provision in Lagos. Figure1, below shows NSAs water distribution structure in Lagos.

Figure 1. Non-State Actors Water Distribution Structure in Lagos



Source: Own construction.

4.1 Small-scale Providers

In this paper, the different NSAs are categorized into small-scale and Large-scale private providers. This categorization is done based on their assets, number of personnel, clients and management style. The small-scale providers are the water vendors, private borehole operators and water tankers. While the large-scale providers, are represented by water sachet producers. Small-scale providers according to Solo (1999: 122), are very efficient in water provision. The edge they have over public provision is that they are able to recover cost and are financially sustainable. They have virtually no unaccounted for water (UFW), and they do not require public subsidy, borrowing or debt. Furthermore, small-scale providers have their own independent source of water, they respond to the need of the poor, and can serve all income groups; they are"demand responsive" and do not disregard users willingness to pay (ibid)

4.1.1 Water Vendors (Pushcart)

Water vendor according to the Water Utility Partnership, refers to 'an individual who purchases water (e.g. from a network connection or private borehole), then transports it and sells it to households and/or businesses' Whittington et al, in Okioga (2007), divided water vendors into three major types which are:

- ◊ Wholesale vendors (those who sell water from sources such as boreholes to users and distributing vendors)
- ◊ Distributing vendors (those who sell water by door-to-door sales to users)
- ◊ Direct vendors (users come to direct vendors to buy water)

In this paper however, the use of water vendors is only restricted to those who sell water from door-to-door in pushcarts or wheelbarrows.

In Lagos, there are a number of water vendors operating in the nooks and crannies of the city, especially in low income residential areas. In an interview conducted with water vendors they hinted that they buy water from privately constructed boreholes and distribute to their customers. They do not get water from public utilities, so they could be described as independent water providers. This is unlike the practice in some African countries where vendors buy water from public utilities standpipes and resell to the public (see Collignon and Vezina, 2000).

Their assets include wheelbarrow/pushcart, jerrycans (maximum, 12), and their energy which they need to push the cart from source to point-of-use (i.e., to their clients). The price charged by water vendors are not regulated, likewise the quality of their water. Those who rely on vendors for their source of water pay eight times more than those who get their water from the public utilities as we shall see later in the discussion on the demand and supply of water in Lagos. Since this is the common source of water to the poor, it becomes obvious as rightly observed by the World Bank (2004: 160), that the poor bear a 'disproportionate share of the impact of inefficient water and sanitation services.

Although, the activities of water vendors are unrecognized by government in the context of Lagos, nevertheless, they are not criminalized. What seems to

be in place is a tacit recognition of their role. As hinted by one state official at the water resources department in the state ministry of environment, *the attitude of government towards the water vendors and other alternative providers is that of tolerance*. He maintained that apart from the fact that they complement the efforts of LSWC, they serve also as a source of employment to people. This tacit recognition of water providers can as well be said to be a tacit acceptance by the government that it has failed in its responsibility to provide the most basic service (water), to the teeming population of Lagos. The government has not been able to come up with an enabling policy to give recognition to NSAs providers and thereby enforce regulation. This inability of government has been attributed to the weak policy environment, which is disabling NSAs actors rather than enabling them (Larbi, et al, 2004, Larbi, 2006). This tacit recognition of the role of NSAs needs to be translated into legal recognition to enable the NSAs.

4.1.2 Commercial Borehole Operators

These are individuals who own borehole either in their compounds or at strategic locations. A number of them sell water directly to vendors and individuals who buy in jerrycans. Others sell only to tankers. They engaged the services of borehole construction companies to construct their boreholes. Construction of borehole in Lagos cost between 150,000-200,000 naira, about $1,271-$1,695. They use ground and overhead reservoirs to store their water. The price of borehole-supplied water is 150 naira per cubic meter. And this price is fixed by the commercial borehole owners' association. The borehole water business is in most cases managed by the owner, who makes sales directly to users. In some cases, one or two persons are employed to sell water on behalf of the owner.

Under the LSWC Edict, No. 25 of 1986, before anyone can construct boreholes, wells or any other form of abstraction, permission must be obtained from LSWC. But in Lagos, interview conducted, revealed that boreholes are constructed indiscriminately without obtaining abstraction right, whether for private household purpose or for commercial purpose. Added to this problem of registration, is the issue of quality of water delivered by borehole operators. Water provided by borehole operators is supposed to meet the maximum quality set by the standards organisation of Nigeria. They are, therefore, required to send samples of their water to LASEPA, the agency responsible for water quality control in Lagos. But interview conducted with LASEPA revealed that this is hardly the case, as many borehole owners do not adhere to this instruction, and yet there is no borehole owner that has been sanctioned. This weakness in regulation of borehole water portends a grave danger to public health. A research conducted by Okoh et al (2005), found out that borehole, sachet water and well water being distributed in Southwestern Nigeria, contained inorganic chemicals and microbiological contaminants.

4.1.3 Tanker Truck Operators

Tanker truck operators are another set of NSAs that are involved in the water provision in Lagos. They lift their water from ground reservoirs of privately constructed boreholes into a cistern or storage tank, and distribute to final consumers. They are mainly concerned with water distribution. Tanker operators draw their clients from residents of new areas in the city, construction sites, and food processing industries who need high volume of water. The cost of water from tanker operators is 2,500 naira per 25,000 gallons (LSWC). This could be higher depending on the distance from source to point of delivery, since the tankers have to build the cost of diesel into the price consumers pay. The tanker operators have a union which meets periodically with state officials to solicit material assistance such as trucks from the state, to enhance their water delivery mechanism. However, tanker drivers interviewed said such assistance has not been forthcoming. This situation captures vividly the nature of the disabling environment in which the NSAs operate in Lagos (see Larbi, et al, 2004).

4.2 Big water providers (Sachet water producers)

In this paper, sachet water producers are categorized as big NSAs water providers because they are relatively larger in scale, have more assets, and have different management style from the small water providers. It costs between 800,000-1million naira, which is about $6,782-$8,478, to register a sachet water factory (NAFDAC). According to NAFDAC guidelines, the following conditions must be met before anyone is registered to run sachet water factory: there must be acceptable sources of water, which should be spring water, borehole, and public utility water. Well water and the lifting of water from outside source with tanker to the factory are not permitted. Furthermore, there must be adequate water and purification system, factory layout has to be located in a non-residential area, and the factory building must be walled round. Provision must also be made for storing materials, completed products, water treatment room, packaging room, and there should be a well equipped in-house quality control laboratory (ibid). If these requirements are satisfied, applicants are given a NAFDAC registration number to operate, and this must be embossed on the sachet bag.

An average sachet water factory needs a staff strength of six which must include a trained chemist, to get started. In principle, NAFDAC is supposed to inspect products of sachet water companies both in the factory and market. But, it has been observed, that no sooner producers are successfully registered, than they often fall short of standards expected (Adekunle et al., 2004). This situation may be the result of a sloppy monitoring and control of sachet water factories by NAFDAC.

The major source of bulk water for sachet water producers in Lagos is borehole. They sink their own borehole by engaging the service of water borehole drilling companies. Water is pumped by a submersible machine into an overhead plastic tank which serves as the reservoir. From there, water goes through the process of production, and quality check is done in the laboratory by a chemist.

In terms of distribution, the sachet water producers do not sell directly to end users, rather they sell in bulk to kiosk owners, and other small-scale retailers who operate mainly in the informal economy. The organizational structure of sachet water producing firm includes, production, quality control, packaging and distribution. The concept of unbundling is captured not only in the operational procedure of sachet water producers, but also in the method of water provision by other NSAs. For example, there is separation of functions; there are those involved in construction of the boreholes, while some others are into production and distribution, some are only engaged in distribution, while some manage the sales on behalf of others (Solo, 1999). There is therefore a measure of delineation of functions among the non-state providers of water. The price of sachet water is not fixed by the state; rather, pricing is done by the "Table Water Producers Association". In the area of quality regulation, as was gathered from the interview conducted with a chemist in one sachet water producing company, NAFDAC, does sporadic control in the market by taking samples of sachet water in circulation for laboratory analysis. This is not a proper approach to effective regulation. Ordinarily, one would expect regulation to be more focused on the factory level where production, packaging and quality check are done. This seems not so, as the factory hardly gets control once the requirements for registration have been satisfied.

4.3 Assessment of the role of NSA in water provision

The role of NSAs in water provision, no doubt, has offered alternative sources of water, especially to residents of low income areas in Lagos. Users observed that they play useful role because NSAs providers supply water on a regular basis as demanded by users, i.e., they are responsive to users demand (see Toro, 1999). Some hinted that the coming of NSAs has saved them the time and energy they would have used in going around to get water. As for those connected to pipe water, the services of NSAs they acknowledged, offer them a back up whenever the water from the tap stops flowing. However, on the negative side, users indicated that prices charged by NSAs were generally high, even though the delivery meets their needs and preferences.

On the whole, one of the strengths of NSAs lies in their ability to serve users that are not served or under served by public utilities, and they are also able to develop interpersonal relationships with users (Toro, 1999). Since the NSAs providers deal directly with the users, they could be held accountable by the users if anything goes wrong. For example, they can decide to withdraw their patronage from one provider, and go for another provider. This is what World Bank (2004: 161), refers to as 'short cut of accountability'

However, NSAs are confronted by certain challenges which reduce their capability to provide water in a more efficient and effective manner. In the first instance, NSAs do not have enough material and financial resources to expand their businesses and increase coverage. Second, most of the NSAs have no legal recognition, and hence they do not get support from the government in terms of financial and technical assistance. Another constraint faced by NSAs is the incessant failure of electricity supply. In most cases private providers

especially the borehole owners and sachet water producers have to provide their own electricity generating plant as a back up for public utility provision. This adds to the operating costs of NSAs, which is then passed on to users in the form of price hike. Furthermore, NSAs do not transport their water through pipes; they use different means, for example, truck tankers, jerrycans in pushcart and so on. A corollary of this is that quality of water is affected. Just as it was mentioned earlier, water could be contaminated between source and point-of-use. This problem stems from the fact that most NSAs providers of water do not have the technical expertise to undertake water quality check even though some, like the sachet water producers, claim to be doing that.

4.4 Demand and Supply of water

The market for water provision in Lagos did not emerge out of conscious policy of the state but rather, as a response to the inability of state utility to provide sufficient water to all. An analysis of market of water provision in Lagos draws attention to the declining role of state in water provision and the abandonment of the social welfare or equity goals which had informed state provision of water. It also showed that in the case of water distribution in Lagos, "one size does not fit all". Allocation and pricing of water are done outside the sphere of government. The market of water provision is driven by users demand, and their ability and willingness to pay. In Lagos, NSAs have a major share of the market, 70% coverage (see Coker, 2004), their main catchment area being the areas not connected to pipe water supply by the state public utility. The different providers operating in the market of water provision in Lagos have different prices and there is a huge price differential between the publicly-provided water and privately-provided water. The table below summarizes the different water rates in the market. It should be mentioned that the prices of water NSAs providers charge, are determined by a number of factors, which include, willingness and ability of users to pay, distance, and fluctuations in the cost of production and distribution.

Table 4.1Price of water by source in Lagos

Source of water supply	Average price/m3 in Naira
➢ LSWC	50/m3
➢ Sachet water	100, 000/m3
➢ Wells	100/m3
➢ Pushcart water vendors	400/m3
➢ Tankers	2,500 per 25, 000gallons of water
➢ *Borehole	150/m3

Source: LSWC, 2007.
* Price of borehole water was got from field work.

Table 4.1 above indicates a high price differential between the private providers of water and the public sector provision. It cost 50 naira per cubic meter for public sector provision, while, private provision can be as high as 400 naira per cubic meter. Since residents of low income neighbourhoods get their water primarily

from private water providers, it is the view of the researcher, that the market of water provision is disproportionately skewed against them. The high rate charged by NSAs is likely to have grave impacts on quantity and quality of water that people in low income category can afford, especially in a country such as Nigeria, where the minimum wage is 5,500 naira per month (GoN, 2000). And in a study of the monthly income level of Ajegunle residents, a low income area in Lagos, done by Agboola and Agunbiade (2006), it was revealed that 47% of the people had a monthly income of less than 10000 naira or less than $100. Table 4.2 below depicts the monthly income level of Ajegunle residents.

Table 4.2 Monthly Income Level of Ajegunle residents

Monthly Income in (Naira)	Frequency	Percent
Less than 10000	171	47.8
10000-20000	130	36.3
20001-40000	33	9.2
40001-60000	16	4.5
60001-80000	8	2.2

Source: Agboola, (2006: 9)

However, the size of household also goes a long way in determining the quantity and expenditure on water. In Lagos, where 96% of the household size fall between 2-5 and 6-9 (Osinubi, 2003:14), that is, average of 5 people to a household, expenditure on water is likely to be very high. The difficulty people in low income group are likely to grapple with in terms of water affordability was also captured in a previous study on household water consumption and water price in Lagos. The survey, conducted in the year 2000 on household water consumption in Lagos (see, www.stoveco.com/Lagos), indicated that 61% of households have more than one source of water, primary source and a supplementary source; majority of the household use 150-170 litres of water a day. Furthermore, the study explained that the most densely populated areas consume the highest volume of water and have the largest rate of water sales.

If an average household consumes 150-170 litres a day, and given that price of water by NSAs is as high as 400/m3, it then means that in a month, a household will spend about 1,800 naira on water. And since majority of the household use more than one source of water, with a minimum wage of 5,500 naira, it then implies that the low income earners spend substantial percentage of their income on water. This confirms the observation of Hall (2006), that the prices of water vendors are equal to 30% of the income of the poorest household in Nigeria.

Conclusion

The forgoing chapter has demonstrated that various models of water provision exist in Lagos. NSAs do not have complex management structure, and they are not bogged down by unnecessary bureaucracy. They serve as source of employment to people and thereby empowering them economically. Furthermore, the NSAs can provide services that meet the needs of different categories of users. For example, they can supply water to those who need high volume of water, and as well as to those who buy in jerrycans or bucket day by day. The NSAs do not require huge capital outlay like the government to be able to provide water, and they have interpersonal relationship with users. This convenience offered by NSAs notwithstanding, there are inadequacies in the aspects of price and quality. For example, the price of vended-water can be eight times higher than the price of water provided by public utility. These inadequacies have negative effect on users' ability to afford adequate and quality water, especially those residents of poor areas who depend mainly on NSAs for their water needs.

Self-regulation of quality and price, and separation of functions in the water provision chain are all features evident in the practice of water provision by NSAs in Lagos. Since NSAs have a substantial share in the market of water provision, the role of government should be to enable the potentials of NSAs, through regulation, technical support and capacity building, and stimulate the market to trigger competition which will enhance efficiency and effectiveness in water provision. When private providers of water are left to function without regulation, they are not likely to supply water in sufficient quantity and quality that will meet the socially acceptable level in the midst of externalities because they do not take into cognizance the 'marginal social benefits in their decisions' (Galiani et al., 2002: 4).

Chapter 5: Governance without Government in water provision in Lagos.

5.1 Introduction

Governance without government as referred to in this paper, means a situation where the provision and regulation of water is done without the government. Rather these responsibilities are done by NSAs. Governance in the context of service provision includes activities of both formal and non-state actors. And in Lagos this is actually taking place in terms of the role of multiple actors. Because water is a merit good, government, on one extreme is involved in its provision and regulation, and on the other extreme, NSAs are involved in provision and self-regulation.

This concluding chapter is therefore on governance without government. It will give a summary of the findings in terms of multiple modalities of water provision in Lagos city. Furthermore, explains how government is the missing link in water provision in Lagos. And finally, it draws a general conclusion and recommends the need for enabling role of the state.

5.2 Summary of Findings

Multiple Modalities of water provision

It is evidently clear that there are multiple modalities of water provision in Lagos. And this provides an opportunity for the state to engage with private sector in the form of public-private partnership (PPP). Currently, as it has been presented in this paper, state and NSAs coexist in the water provision market in Lagos. The state water corporation which has the monopoly over water provision provides directly for the few who are connected to the network of pipes, while the shortfall in state provision is filled by various NSAs providers, which include water vendors, borehole owners, tanker operators, and sachet water producers. Although involvement of this wide array of water providers is not formally recognized, they are tolerated because they have become a “necessary evil” since government provision is grossly inadequate. The multiple modalities of water provision accentuate the need for government to engage with NSAs, and effectively regulate water provision by these different channels to safeguard the interest of the public. As noted by Solo(1999), the recognition of the role of NSAs such as small-scale providers will shift the focus of conventional regulatory activities from mainly on price and quality control to that of promoting competition and sharing of knowledge. Besides, the government also has to provide the enabling environment for the NSA actors to excel. Unfortunately in Lagos, government is not providing the enabling environment for this to take place. For example, majority of the NSA providers are not registered by the government and also not regulated. And, by implication, their role does not get legal recognition and they do not get any financial or technical assistance from the government. Instead, regulatory activities such as price fixing and quality control are self-initiated by the providers themselves through their different umbrella associations. The snag here is that the capacity of self-regulation is limited, and this may undermine the public interest.

Government, the missing link.

It is apparent from this study that in the provision of water in Lagos, government role as a provider and enabler is missing. To get this clearly lets go back to the meaning of government already explained in this paper. Government connotes activities that are backed by a formal authority (Rosenau, 1992). From the forgoing definition of government, we can speak of the presence of government if government plays an active role either as a direct provider or regulator in the provision of water. The social or merit good feature of water demands that government should be involved in its provision, or subsidize private sector provision in order to ensure that the needs of all are catered for. Even when the government withdraws as a direct provider, the public health hazards associated with consuming unwholesome water behooves government to play the role of a capable regulator.

The case of water provision in Lagos showed that government can only provide water to a tiny minority, whilst majority of the people are left to device their own coping strategies to access water. Hence, different modalities of water provision have emerged as a response to the huge demand for water. In terms of access to water in Lagos, self-provision, and water vending have become a common practice. With this scenario, one can confidently conclude that many residents of Lagos do not feel the touch of government as far as access to safe water is concerned.

Regulation

Another finding of the research concerns the regulatory mechanisms. Apart from the state failing as a direct provider, it has also failed as regulator. The activities of the regulatory bodies set up by the government are not coordinated, there is duplication of responsibilities, and they lack independence. The cumulative effect of this is that regulation becomes atrophied, information asymmetry between regulatory bodies and providers is widened, and as a result, providers of water are left to their own devices. In Lagos, there is little or no regulation of price or quality of water provided by NSAs by any formal authority even though there are laws guiding water abstraction and distribution. Additionally, the state is regulating itself, and thereby constituting itself to both a player and referee in water provision. However, the theory states that for there to be effective regulation, the regulatory body must be independent and must not be influenced by the provider or users (Awortwi, 2003, Nickson, 2002).

Disabling environment

Another finding of this research is that Non-State providers of water are tolerated, but they do not get legal recognition by the government, and consequently they do not receive material or technical assistance from the state. They are seen as illegal providers of water or at best, informal providers of water. Consequently, NSAs have no working relationship with the state; as a result, government cannot facilitate the efforts of NSAs to enhance quality of service provision. Furthermore,

government is not able to regulate the market of water provision in terms of demand and supply factors already mentioned in this paper.

Affordability

The issue of water affordability for the low income earners is another important finding. Low income earners get their supply of water mainly from NSAs whose high prices take a substantial part of their monthly income (expenditure on water is around 30%). They pay more for water than those who get their supply from public utility. This can reduce the quantity and quality of water accessible to low income earners and diminishes their capability to function in the society (see Sen, 1999).

Lack of users' participation

The role of users seems to be downplayed in the provision of water in Lagos. Users do not have control over the quality, quantity and price of water they get. As consumers, their rights are not protected or respected. However, efficient water governance requires an institutional framework that will not only enhance the capacities of providers of water, but, also allows users to participate in having a say on issues that concerns their lives (UNDP, 2004).

5.4 Conclusion

This paper has explored the different mechanisms for water provision. It establishes that there are multiple modalities of water provision taking place in Lagos. The NSAs play a role in water provision in tandem with the state provision. On one hand, the state plays the role of a direct provider, and on the other hand, it makes policy and does regulation. However, the state has not been able to extend service coverage to majority of the population, and has also not been able to ensure equity in terms of accessibility to water. A number of factor accounts for this, and they include underutilization of production capacity, inadequate investment especially in the aspect of distribution, gross inefficiency in bill collection resulting in low revenue, and high percentage of unaccounted for water. Other factors include spiraling population of Lagos and erratic electricity supply. This failure of the conventional method of water provision through state utility has resulted in the emergence of different types of NSAs and changed the dynamics of water provision in Lagos. Those mentioned in this paper include water vendors, borehole owners, tanker operators, and sachet water producers. In most of the literature on NSAs in basic service delivery, there is the consensus that NSAs play vital role in complementing the efforts of the public sector in service delivery. In Lagos, the private water providers are not formally recognized and they are not given the benign environment to operate, rather, the environment in which they operate could be described as malign. Their activities are not properly regulated, even though water is so crucial to public health and the social and economic development of the society. Instead, NSAs actors do self-regulation, for example, in the area of price fixing, which is collectively determined by the different associations. They also do their own quality control, sachet water producers are required to have a functioning laboratory where they

make analysis of water for microbiological contamination. All these arrangements showed the absence of government in the governance of water provision in Lagos. On the whole the state appears to play a minimal role in water provision in Lagos; hence, there is governance without government in the water provision sector.

5.5 Recommendation: The Need for an enabling role of the state.

The study of water provision in Lagos has revealed the lack of robustness in the role of state both as a direct provider and as a regulator. The eclectic nature of water provision in Lagos makes it imperative for the state to play the role of enabler to ensure efficient provision of quality and affordable water. The very fact that private providers are dominant in water provision does not imply that government should abdicate its role. The concept of enablement, therefore defines the new role government has to play in a situation were core state responsibility such as water provision, is increasingly being performed by NSAs. The task of government in relation to creating enabling environment for NSAs include "defining a situation and identifying key stakeholders, and then developing effective linkages between them; influencing and steering relationships to achieve the desired outcomes; and establishing mechanisms for effective coordination'. (Stoker, 1998:24).

In the context of water provision in Lagos, state enabling role will therefore include the formulation of a more vibrant policy and legal frameworks. Such policy and legal frameworks must recognize the role of NSAs in water provision by giving them license to operate and setting the minimum requirements that must be met before anyone or a group of persons embarks on water provision. There is therefore the need for government to positively engage with the NSAs by way of recognition, dialogue, facilitation, collaboration, contracting and regulation (See Helmsing, 2007, Sansom, 2006). By so doing, the state will be able to scale up, monitor and regulate the prices and quality of water provided by NSAs, and ensures better service delivery in the water sector.

Furthermore, enabling role of government will raise the level of accountability between providers of water and users. Besides, it will also help stimulate the market of water provision, encourage free entry and spur competition in the market; help government discover the potentials and constraints of NSAs, and offer them the necessary financial and technical assistance (Toro, 1999). Enabling NSAs in water provision as asserted above, will go a long way in the effort to achieve the millennium development goals for water already mentioned in the problem statement.

References

Adejumobi, S. (2002) *The Privatisation policy and the delivery of social welfare services in Africa: A Nigerian Example*. Journal of Social Development in Africa, Vol. 14, No. 2, Pp 87-108.

Adekunle, L.V. et al. (2004) An *assessment of the health and social economic implications of sachet water in Ibadan, Nigeria: A public health challenge*. African Journal of Biomedical Research, Vol. 7 Pp5-8.

Adriana, A. et al. (2006) *The peri-urban water poor: citizens or consumers?* Environment and Urbanization. Sage Publications

Agboola, T. and Agunbiade (2007) *Urbanization, slum Development and Security of Tenure: the Challenges of Meeting Millennium Development Goals (MDG) 7 in Metropolitan Lagos, Nigeria*. A paper presented to the PRIPODE Workshop on Urban Population, Development and Environment Dynamics in Developing Countries.

Awortwi, N. (2003) *Getting the Fundamentals Wrong: Governance of Multiple Modalities of Basic Services Delivery in Three Ghanaian Cities*. PhD. dissertation. Shaker, Maastricht

Awortwi, N. and Helmsing (2007) *"Governance of basic services provision in Sub-Saharan Africa: The need to shift gear"* A paper presented to AEGIS European Conference on African Studies in Leiden, The Netherlands.

Bakker, K. (2002) *From state to market? : Water mercarntilization in Spain*. Environment and Planning. Vol. 34, Pp 767-790

Batley, R. (1996) *Public-Private Relationships and Performance in Service Provision,* Urban Studies, Vol. 33. Nos. 4-5, 723-751.

Clark, R.G.et al. (2002) *Measuring the Welfare Effects of Reform: Urban Water Supply in Guinea.* World Development Journal. Vol. 30, No. 9. Pp. 1517-1537

Coker, O. (2004). *Reforming the water sector in Lagos State: The Lagos Model.* Available on the internet at: http://www.boellnigeria.org/documents/documents/lswc%20coker%20presentation.htm

Collignon, B. and Vezina (2000) *Independent water and sanitation providers in African cities. Full Report of Ten-Country Study*. UNDP-World Bank and Sanitation Programme.

Deloitte Touche Tohmatsu (2000) *Regulatory and institutional arrangements for Lagos water and sanitation project.* Final Report on Lagos water reform by Deloitte Touche Tohmatsu submitted to Lagos State Government on October 16, 2000.

Galiani, S. et al. (2002) *Water for Life: The Impact of the Privatization of Water on Child Mortality.* Available on the internet at: http://faculty.haas.berkeley.edu/gertler/working_papers/water%20for%life%20june

Gandy, M (2006) *Planning, Anti-planning and the Infrastructure Crisis Facing Metropolitan Lagos,* Urban Studies, Vol. 43, No. 2, 371-396.

GoN, (2000) *National minimum wage Amendment Act 2000*

Grindle, M.S (2002) *First in the Queue? Mainstreaming the poor in service Delivery.* Internet site: http://siteresources.worldbank.org/INTWDR2004/Resources/22490_9

Hall, D (2006) *Water and electricity in Nigeria* Available on the internet: http://www.psiru.org/reports/2006-09-WE-Nigeria.

Helmsing, A.H.J (1997) *Government Enablement and Planning In: Locality, State and Development*, Essays in honour of Jos G, M. Hilhorst The Hague: ISS pp 107-129

Houtzager, P. P (2003) 'From Polycentrism to the polity', in Peter p. Houtzager and Mock Moore (eds.), *Changing Paths: international development and the new politics of inclusion.* University of Michigan

Jensen, P.K. et al (2004) *Is there an association between bacteriological drinking water quality and childhood diarrhea in developing countries?* Tropical Medicine and International Health, Vol. 9, No. 11, PP 1210-1215.

Kaul, I. et al. eds. (1999) *Global Public Goods: International Cooperation in the 21st Century*. Oxford University Press.

Kessides, I.N (2004) *Reforming Infrastructure: Privatisation, Regulation and Competition.* Worldbank and Oxford University Press.

Khan, M.H (2002) *State Failure in Developing Countries and Strategies of Institutional Reform.* Draft Paper for ABCDE Conference, Oslo 24-26 June, 2002. Available on the internet Address: http://www.gdnet.org/pdf2/online_Journals/cerdi/issues2_3/Khan_paper1.pdf

Komives, K. (2001) *"Designing pro-poor water sewer concessions: Early lessons from Bolivia"*, Water Policy, Vol.3 issue 1

Larbi, G. et al. (2004) Non-*state Providers of Basic Services. DFID, UK.*

Larbi, G (2006) *Opportunities and challenges in enabling non-state providers of basic services: case studies and lessons from Nigeria.* Workshop Paper, Stockholm, April, 2006.

LSWC Edict, 1986.

LSWC Edict, 2003

LSWC annual Reports 2001. Available on the internet at: http://www.lagoswater.org/bidding_prequantification_docs.php

McDonald, D.A and Ruiters eds. (2005) *The Age of Commodity: Water Privatization in Southern Africa.* Earthscan, London, UK.

Mitlin, D. (2003) *Competition, Regulation and the urban poor: A case study of water Centre on Regulation and Competition.* Working Paper Series no.37. Internet Address: http://www.Competition_regulation.org.uk/publications/working_papers/wp93.pdf

Mugerwa, S.K. ed. (2003) *Reforming Africa's Institutions: Ownership, Incentives, and Capabilities.* Washington D.C., United Nations University Press.

NAFDAC Nigeria. Guidelines for the Production and Registration of Packaged Water. Available on the internet. Address: http://www.nafdacnigeria.net/downloads/FoodsupermarketIterms/PACKAGEDWATER.pdf.

National Population Commission of Nigeria, Census, 2006.

Nickson, A. (2002) "*The role of the non-state sector in urban water supply",* presented at the World Development Report 2005/04 Workshop "making services work for the people", Eynsham Hall, Oxford

Okioga, T. (2005) *Water Quality and Business Aspects of Sachet-vended Water in Tamale, Ghana.* Available on internet: http://web.mit.edu/watsan/Docs/Student%20Theses/Ghana/Theses%20_%20Tesha%20Okioga%205-18-07.pdf.

Okoh, A.I. et al. (2005) *The Culturable Microbial and Chemical Qualities of Some waters used for Drinking and Domestic Purposes in a Typical Rural Setting of Southwestern Nigeria.* Journal of Applied Sciences. Vol. 5, No. 6, Pp 1041-1048.

Olaosebikan, B. (1999) *Lagos State Water Corporation: Dawn of a New Era in Water Supply.* LSWC Publication.

Olayiwola, L.M. et al (2006) *Spatial Variation in Residential Land value determinants in Lagos, Nigeria.* Available on the internet at: http://www.fig.net/pub/accra/papers/ts24/ts24_04_olayiwola_etal.pdf

.

Olowu, D. (1999) *Public Service Delivery*. In Ademolekun, L ed. (1999), *Public Administration in Africa* West view Press.

Osinubi, T.S. (2003) *Urban poverty in Nigeria: A Case Study of Agege area of Lagos State, Nigeria.* Available on the internet. Address: http://www.gdnet.org/fulltext/osinubi.pdf. Retrieved on 27-10-08

Owuama, C. and Uzoije (2005) *Waste water Disposal and Groundwater quality in Owerri, Nigeria.* Journal of Environmental Systems Vol31, No.1, Pp 69-70.

Peter, B.G and Pierre (1998) *Governance Without Government? Rethinking Public Administration.* Journal of Public Administration Research and Theory. Vol. 2 Pp 223-243

Rhodes, R.A.W. (1996) *The New Governance: Governing without Government,* Political Studies, XLV. 652-667

Rosenau, J.N. & Czempiel, eds. (1992) *Governance without government: Order and change in world politics.* Cambridge University Press.

Roth, G. (1987) *The Private Provision of Public Services in Developing Countries.* Oxford, University Press.

Sansom.K. (2006) *Government Engagement with Non-State Providers of Water and Sanitation.* Journal of Public Administration and Development. No. 26, pp 207-217.

Sen, A. (1999) *Development as Freedom.* Oxford University Press.

Solo, T.M. (1999) *Small-scale entrepreneurs in the urban water sanitation market.* Environment and Urbanization, Vol. 11, No.1 Pp 117-132.

Standards Organization of Nigeria (SON), 2007. Nigerian Standard for Drinking water Quality. Available on the internet: http://www.unicef.org/nigeria/ng_publications_Nigeria_Standard_for_Drinking_water_Quality.pdf.

Stoker, G. (1998) '*Governance as Theory: Five Propositions', International* Social Science Journal 155: 17-28.

Sijbesma, C. and Van Dijk, eds. (2006) *Water and Sanitation: Institutional Challenges in India* Manohar Publishers, New Delhi.

Ugaz, C. (2003). *Approaches to Basic Services Delivery: Privatisation, Decentralization and Equity.* UNRISD.

UNDP, (2004) *Water Governance for Poverty Reduction: Key Issues and the UNDP Response to Millennium Development Goals.*

UNDP, (2006) *Beyond scarcity: power, poverty and the global water crisis.*

Van der Wel, P. (2004) *Privatisation by stealth: The global use and abuse of the term 'public-private partnership.* ISS Working Paper Series No. 394.

Wateraid (2006) National Water Sector Assessment. Available on the Internet. Address: http://www.wateraid.org/documents/plugin_documents/nigeria_snapshot.pdf

Water Consumption in Lagos. Available on the internet at: http://www.stoveco.com/Lagos2000/page4.html

Retrieved on 27/10/08

Water Utility Partnership (2001-2003) *Toolkit. A Practioners's Companion.* Available on the internet at:

http://web.mit.edu/urbangrading/waterandsanitation/resouces/definitions.html Retrieved on 20/10/08

World Bank (1994) *Infrastructure for Development*, World Development Report, 1994

World Bank (1997) The *state in a Changing World*, World Development Report, 1997

World Bank (2004) *Making services Work for Poor People*. World Development report 2004

World Bank Report on LSWC, 2004. Available on internet, Address: http://www-wds.worldbank.org/external/default/WDSContentserver/WDSP/IB/2004/07/07

WHO (2003) *The Right to Water*. Health and Human rights publication series no.3.

Wright, J. et al (2004) *Household drinking water in developing countries: a systematic review of microbiological contamination between source and point-of-use*. Internet site: http://www3, interscience. Wiley.com/cgi-bin/fulltext/118806391/PDF START. Assessed on 16-07-08.

Zegarra, E. (2004) *The market and water management reform in Peru*. Cepal Review 83.

Available on the internet:
http://www.Cepal.org/publicaciones/xml/2/21972/lcg2231iZegarra.pdf

.

APPENDICES

SEMI-STRUCTURED INTERVIEW
(State government officials)

Key informant interviews

Consent: Good morning/afternoon? My name is _____. I am an MA student at the Institute of Social Studies in The Hague, The Netherlands and I am carrying out a study on the governance of water provisioning in Lagos. I would like to have your views which will be confidential and only be used for the purposes of the study. Are you willing to participate in this study? If yes, thank you.

1. Government officials rank/job description_____.
2. What is the policy of government regarding water provision in Lagos city?
3. Is there any formal involvement of non-state providers in the Lagos water sector?
4. What is the level of private sector involvement in the provision of drinking water?
5. What are the incentives in place to enhance the capacity of private providers of water?
6. How does government carter for the excluded and marginalized groups as far as accessing safe drinking water is concerned?

Key Informant Interviews

<u>Lagos State Water Corporation</u>

Consent: Good morning/afternoon? My name is _____. I am an MA student at the Institute of Social Studies in The Hague, The Netherlands and I am carrying out a study on the governance of water provisioning in Lagos. I would like to have your views which will be confidential and only be used for the purposes of the study. Are you willing to participate in this study? If yes, thank you.

1. What is the responsibility of LSWC in ensuring that water is accessible to all Lagos residents?
2. How much does the LSWC require per year to be able to provide water to Lagos residents?
3. In your view what are some of the obstacles LSWC grapples with in the provision of potable water?
4. What is the extent of LSWC service coverage?
5. Does the LSWC share this responsibility with other non-state providers?
6. If yes, can you describe the relationship between LSWC and non-state actors?

Key Informant Interviews.

For water Vendors/Sellers/Tankers

Consent: Good morning/afternoon? My name is _____. I am an MA student at the Institute of Social Studies in The Hague, The Netherlands and I am carrying out a study on the governance of water provisioning in Lagos. I would like to have your views which will be confidential and only be used for the purposes of the study. Are you willing to participate in this study? If yes, thank you.

1. How profitable is the water business?
2. What are the problems you contend with in the water provision business?
3. From where do you buy your bulk water?
4. In which areas of the city do you sell the water?
5. How do you transport your water from source to point-of-use?
6. How much does it cost to start a water vending business?
7. What are the factors you consider when costing you water?
8. Do you have a union or organization as water vendors?
9. What are the specific objectives of this union?
10. In what ways does the union regulate the activities of members?

Key Informant interviews.

Water regulatory commission

Consent: Good morning/afternoon? My name is _____. I am an MA student at the Institute of Social Studies in The Hague, The Netherlands and I am carrying out a study on the governance of water provisioning in Lagos. I would like to have your views which will be confidential and only be used for the purposes of the study. Are you willing to participate in this study? If yes, thank you.

1. How is water regulated? (price and quality standards)
2. What are the means of regulation?
3. How are the activities of the different non-state providers (including self-provision) regulated?
4. What is the capacity of the regulatory commission to perform this role?
5. What is the level of end users involvement in regulation?
6. What is the degree of end users control of the quality of service?

Semi-Structured interview for water users.

Consent: Good morning/afternoon? My name is _____. I am an MA student at the Institute of Social Studies in The Hague, The Netherlands and I am carrying out a study on the governance of water provisioning in Lagos. I would like to have your views which will be confidential and only be used for the purposes of the study. Are you willing to participate in this study? If yes, thank you.

1. Do you have water currently?
2. Where do you get water for everyday use?
3. How often do you get your supply of water?
4. What can you say about the price of water?
5. How satisfied are you with the services you get from water provider?
6. What can you say about the way you complaints are treated by your provider?