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Households' Coping Strategies with Unsatisfactory Urban Services in a Planned City of Developing Countries: A Case Study of Abuja, Nigeria

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HOUSEHOLDS’ COPING STRATEGIES WITH UNSATISFACTORY URBAN SERVICES IN A PLANNED CITY OF DEVELOPING COUNTRIES: A CASE STUDY OF ABUJA, NIGERIA

By

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DEDICATION

This work is dedicated to my entire family particularly my late father Alhaji Abu Rimi, my mother Hajiya Hindatu Abu, my beloved wife, brothers and sisters and to my relatives, friends and all those who contribute to the development of humanity
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ABSTRACT

Provision of basic urban services, such as potable water, sanitation and refuse collection is vital and instrumental to health and economic well being of any society. However, the delivery of adequate urban services in the cities of developing countries has not been successful due to a myriad of challenges including rapid urbanization, limited resources, urban poverty, informality, slums and squatter settlements, in addition to other socioeconomic and political forces. While numerous studies have documented the inability of the cities to provide adequate services, very few have explored how residents of the cities cope with the problems in service delivery.

Using Abuja as a case study where data was collected through semi-structured interviews with 60 households, observation and review of documents, this dissertation conveys respondents’ experience with the delivery of water, refuse collection and sanitation services. Second, the study explores household’s coping strategies with unsatisfactory delivery of the services according to the Exit, Voice, Loyalty and Neglect (EVLN) model being the most dominant in the literature. Third, it evaluates the efficacy of the strategies. Fourth, it investigates the factors that influence the choice and efficacy of the coping strategies and lastly, it analyzes the sequences in the choices of the strategies.

The study concludes that the centralized public sector approach is ineffective in providing adequate urban services in the city. As a result, informal alternatives such as getting water from vendors, boreholes, local wells, public buildings, rivers and rainfall and garbage disposal by self or informal collectors and septic system were devised for coping with poor urban services. Similarly, informal artisans like plumbers and masons were increasingly utilized for solving problems with service infrastructure and facilities rather than contacting utility officials. These coping strategies are mostly unsafe, costly and inconvenient to households, more especially children.

However, this research found no evidence of residential relocation (Tiebout-exit) due to refuse collection problems but some renters expressed their intention to relocate due to severe water and sanitation problems. A few gated communities changed private refuse collectors and some households decided not to connect to public sewer but remain with their private septic system. Complaints to utility agencies by residents’ associations were highly effective in getting service-related problems solved but it was less effective by groups of neighbors, while individual
households often receive little or no responses from the agencies. The face-to-face mode of voice was found to be more effective than telephone calls or writing letters. Loyalty to the utility agencies was a result of improvement on service delivery or by comparing service performance with other cities. Refuse collection problems were often neglected, but problems with water and sanitation services were neglected only for temporary problems or those located away from homes.

This study also deepens our understanding of the variety of factors that influence the choice and efficacy of the response strategies. Factors that are most relevant to this study are necessity of the services, health concerns and cost of employing the strategies. While housing and neighborhood conditions and inefficiency of the public sector recorded moderate level of influence, socio-cultural factors and city planning regulations are least important in determining the choice and efficacy of coping strategies. This dissertation reiterates the need to recognize quasi-exit as an independent form of exit and the most dominant strategy for coping with poor public services in the Third World. It also concludes that the existing EVLN model is deficient in explaining user response to publicly-provided services in the developing countries and as such, proposes modifying it by adding a new dimension, called “investment”, to represent resources invested in improving the efficacy of the EVLN strategies used to cope with unsatisfactory provision of necessary public services like water and sanitation.

Moreover, this study suggests that the modified EVLN model can be used as a tool for monitoring the performance of public services by utilities agencies. The research also informs planning practice by making policy recommendations to improve the effectiveness of the existing coping strategies. It also calls for establishing residents associations at districts as a means of improving service performance through collective action and proposes other ways of enhancing the delivery of basic public services in Abuja and other cities of developing countries.
CHAPTER ONE

INTRODUCTION

1.0 Background

Access to basic services such as drinking water, sanitation and refuse collection is vital to preservation of life and essential in raising living standard of citizens, especially the poor and minorities who have very little choices. Likewise, provision of basic services is a precondition for health and socio-economic development of any society and it is central to human rights and personal dignity of every human being (Anand & Ravallion, 1993; Hewett & Montgomery, 2001; WHO, 2012). However, in many parts of cities in developing countries, safe drinking water and minimally acceptable sanitation services are non-existent or inadequate. This situation poses serious health risks to all city residents and undermines efforts toward fighting poverty, hunger, child deaths and gender inequality (Lucy, 1981; Shatkin, 2007; UN-Habitat, 2009).

Numerous empirical studies have documented the inability of cities in the developing countries to provide adequate basic urban services to the rapidly growing populations (e.g. Abubakar & Doan, 2010; Barredo & Demicheli, 2003; Best, 1970; Njoh, 2003; Keiner & Cavric, 2006; Kironde, 1993; Mosha, 2004; Potts, 1985; Rakodi, 2005; Siebolds & Steinberg, 1981). For example, according to WHO, two out every five persons in sub-Saharan Africa do not have access to safe drinking water and seven out of ten are using unimproved means of sanitation (WHO, 2012, pp. 4 & 17). As a result, many city dwellers have to rely on self-devised alternatives as services are lacking or are in deplorable state or because they live in areas such as slums and squatter settlements where decent shelter does not exist (Crane & Daniere, 1996; Edward, 1991; Firman, 2004; Ibem, 2009; Jacquemin, 1996; Kafkoula, 2009; Mabogunje, 2004; Rondenelli & Cheema 1988; SERAC, 2006; Simone, 1999; Thoenen, 2007; Ziari, 2006; Zerah, 2010).

A number of challenges to adequate service provision in the Third World have been documented in the literature. First, service delivery is overwhelmed by rapid urbanization and its accompanying issues of slums, squatter settlements and informality (Cohen, 2006; Mabogunje, 2004; Owusu, 2007; Rakodi, 2001; U.N., 2008). The second challenge is limited financial and technical resources required to build, operate and maintain service facilities and infrastructure
(Hayuma, 1980; Ilesanmi, 2006; Myers, 2003a), and lastly, socioeconomic and political factors such as poverty, social exclusion, and inequity in the city and insufficient cost recovery by the utility agencies undermine efforts towards service delivery (Cingranelli, 1981; Harrison, 1982; Lee, 1994; Linebery, 1977; Savas, 1998; Taylor, 1988; UN-Habitat, 2009; Watson, 2009).

While so much effort has gone into researching the reasons behind the inability of cities in the developing countries to adequately provide basic urban services, there are very few studies that explored how the residents of these cities respond to the problems (Crane & Daniere 1996; Devereux and Weisbroad, 2006; Kelly and Swindell, 2002). Further, majority of the literature focus on service delivery in larger geographical units like counties and cities without exploring residents’ experience of service delivery at smaller units such as districts and neighborhoods (Lotfi & Koohsari, 2009; Tsou, Hung & Chang, 2005). Also, accessibility to urban services is typically measured by the percentage of population connected to municipal water supply, sewer system and refuse collection (e.g. Brudney & England, 1982; Dehn, Reinikka, & Svensson, 2002; Hero & Durand, 1985). However, this measure is insufficient to capture the complexity of service delivery because it ignores the quality dimension such as reliability, which is an important component of service provision in the developing countries. Similarly, a pertinent issue that has been neglected in the EVLN literature is to study the extent to which the response strategies are effective in coping with dissatisfaction with public services.

As mentioned earlier, studies that explore citizens’ response to unsatisfactory provision of urban services are scarce in the developing countries. As of 2006, Devereux and Weisbroad (2006) asserted that: “we are not aware of any other studies that estimate the exit and voice responses to dissatisfaction with publicly provided services” (p. 124), and they added that: “there has been little empirical study of the interplay of dissatisfaction, mobility, and complaints in the context of government services other than schools” (p. 125). Therefore, the aim of research presented in this report is to use the case of Abuja city to explore households’ coping strategies with unsatisfactory provision of basic public services. The objectives of the study are discussed in details in section 1.3 of this chapter.

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1 For a comprehensive review of how cities in developing countries failed to address a number of major existing and emerging challenges to providing housing and basic services and the resulting consequences, see the UN-Habitat’s “Planning Sustainable Cities: Global Report on Human Settlements 2009” (UN-Habitat, 2009), and Watson (2009).
In Abuja, Nigeria no similar study has been undertaken yet. Previous research on the delivery of urban services focused only on a few services—solid waste (Adama, 2005; Imam et al, 2008), parks (Gbadegesin & Ayileka, 2000), and sanitation system in the satellite settlements (Ilesanmi, 2006) and there are no known scholarly studies on piped water and sewer system in the city. Furthermore, no established study has been undertaken in Abuja that explored the strategies used by citizens to respond to unsatisfactory service provision. At the country level, one study examined household’s responses to inadequate piped-water provision in the older cities of Lagos and Benin (Acey, 2008). Studying the provision of urban services in Abuja is very relevant because service delivery patterns in the older cities is mostly a function of history, but in a new town, it is possible to more directly observe the theories of citizen responses to unsatisfactory urban services.

In summary, the centralized approach by the public sector that aims to provide adequate urban services has not been successful in the cities of developing countries. While several studies have documented the problems, very few explore how citizens cope with the situation. This study, therefore, fills these literature gaps by using a case study Abuja city to understand the experience of residents with the provision of water, refuse collection and sanitation services. It also explores how the households cope with the problems associated with the delivery of basic public services and the efficacy of the coping strategies and further investigates the factors that influence the choice and efficacy of the strategies.

This study is important because in the developing countries there is more to service delivery than just having access. Even though households may be connected to city piped-water and/or sewer network, the services are unreliable and often complemented with alternatives in the informal sector. Some of the alternative services expose the society to health risk, place huge cost burden and inconvenience households and reduce their productivity, more especially children whose education is affected while looking for alternative water or in disposing garbage. Moreover, understanding these coping strategies would also provide us with an idea of which class of people is being left out in the provision of basic public services.

Another reason why this study is significant is that the provision of basic services such as potable water and sanitation is a central issue in urban planning, healthcare and human development, because access to these basic services is part of human rights and vital to preservation of life and essential in improving living standard and their shortage can compromise
health, hinder economic growth and stifle efforts towards poverty reduction. Also, improving access to these services tends not only to improve a person’s personal situation and wellbeing but at the same time increases the overall economic and social outcome in the society, as well as in achieving the MDG and sustainable development. Lastly, understanding these strategies is very vital as some of them have negative impact on the delivery of the existing public services because, rather than improving the services, they are detriment to service provision. The significances of this study are presented in detail in section 1.4 of this chapter.

1.1 Research Problems and Questions

One of the intricate problems facing urban areas in the developing countries is how to provide at least a minimum basic level of services, and especially to the poor, for whom access to the services is essential in raising their standard of living (Ajwad & Wodon, 2007; Hewett & Montgomery, 2001). According to UN-Habitat, 1.2 billion people in the developing world do not have access to clean water, 2.5 billion have no sanitation and fewer than 35% of cities have their wastewater treated (UN-Habitat, 2009, p. 115). The consequences of inadequate or poor-quality services include compromising public health, hindering economic growth, and undermining efforts to reduce poverty (Anand & Ravallion, 1993; Thoenen, 2007). The WHO estimates that half of the urban population in the Third World suffers from one or more diseases resulting from unsafe drinking water and poor sanitation and infants and small children bear a disproportionate share of the burden of the diseases (WHO, 2012).

In Africa, adequate provision of basic urban services has not been successful even for the planned capital cities that not only have master plans to guide their development, but also receive lopsided share of national resources in service provision compared to other cities. For instance, according to Kironde (1993), after two decades of establishing Dodoma in Tanzania, there was a paucity of social and economic infrastructure like schools, health facilities, water and sanitation in the city. Selolwane (2006) also observed that there was still shortage of shelter in Gaborone, Botswana, and it can take up to ten years to get an allocation on the site-and-services areas and hence squatting continues. In Lilongwe, Malawi, the number of site-and-services plots were considered inadequate and lead to overcrowding as 70% of plots were occupied by more than one household (Potts, 1985). As such, the approach of service delivery by the elaborate master
plans that promised adequate and equitable supply of urban services by the public sector appears to be cracking and the efficacy of the approach is seriously being questioned.

Rapid urban growth is one of the major challenges to the provision of urban services in the cities of developing countries. The record of attempts by the public sector to provide basic urban services is unimpressive due to very high rate of urbanization that makes the cities expand at incontrollable rates and service delivery a thorny task (Barredo and Demicheli, 2003; Cohen, 2006; Mabogunje, 2004; Njoh, 2003; Rakodi, 2001; UN-Habitat, 2009). For example, Gaborone was planned to grow to a maximum of 20,000, but the city grew to 59,657 in 1981 and by 1991 about 50% of Botswana’s population lived within a radius of 100 km of Gaborone and by 2001 the city population of 185,891 accounted for half of the nation’s urban population and about 1/8 of the total national population (Selolwane, 2006).

In Nigeria, inadequate municipal and human waste management and provision of potable water and housing are the main challenges the city of Lagos has not been able to surmount and the key reasons the capital was relocated to Abuja (IPA, 1979; Morah, 1993). Therefore, a pertinent question to policy makers is: to what extent is Abuja, as a planned city, is different from Lagos in terms of delivery of basic urban services like piped water, sanitation and refuse collection and how do citizens of the city cope with unsatisfactory delivery of the services? As such my proposed research set out to answer the following general questions:

(1) How do residents of a planned city in a developing country cope with unsatisfactory delivery of basic urban services?

(2) To what extent are the strategies effective for coping with unsatisfactory delivery of urban services?

(3) What factors influence the choice and efficacy of the coping strategies?

(4) Are there any sequences in utilizing the coping strategies?

1.2 Objectives of the Research

This study has five objectives. First, it investigates the problems associated with the provision of tap water, refuse collection and sanitation services in Abuja, the capital city of
Nigeria. The study specifically explores the challenges facing the centralized public sector approach to the provision of the basic services to different parts of the city from households’ perspectives based on interviews, personal observations and review of secondary data (Deichmann & Lall, 2007; Percy, 1986; Poister & Henry, 1994). The details of the research method are presented in chapter three.

Second, the study explores the variety of strategies used by residents of Abuja as the most rapidly growing city of Africa (Myers, 2003) to respond to the problems with the delivery of basic urban services based on the Exit, Voice, Loyalty and Neglect model (EVLN) (Hirschmann, 1970; Lyons & Lowery, 1986). In particular, it investigates the strategies households devise to cope with the problems of service delivery through informal alternatives or the approaches they use to improve the performance of the existing public services (Acey, 2008; Campbell, Dowding & John, 2007; Curtice & Patrikios, 2009; Zerah, 2000). Third, the study evaluates the extent to which the strategies are effective in improving the performance of the public services or as alternative coping strategies. The study specifically evaluates the effectiveness of the strategies based on their costs, convenience and health safety (see chapter 3 for the detail of the method).

Fourth, the study unravels the factors that influence the choice of the response strategies and their efficacy. It explores how socioeconomic, administrative, neighborhood and other factors influence the choice of strategies households used to respond to unsatisfactory provision of urban services, as well as the levels of influence of the factors on the efficacy of the strategies. Lastly, the study examines if there is any sequence in the ways the strategies are used for each of the services studied (Devereux & Weisbrod, 2006; Lyons & Lowery, 1989). To adequately achieve these research objectives, this dissertation research uses a case study approach (Yin, 2009). The case study data have been gathered from sixty in-depth interviews the author conducted with households, personal communication with the officials of planning and utility agencies in Abuja and direct observation in the summer of 2011, and review of archives and documents. See chapter three for the details of the research design.

1.3 Significance of the Research

Several reasons dictate the need for continuous scholarly attention to the provision of basic public services in the developing countries. First, this study fills the knowledge gaps
identified in the previous section; that we know very little about citizens’ response to discontent with publicly provided services, more especially in developing countries. As such this study adds to the body of literature on the EVLN model and further explores the factors that influence the choice and efficacy of the strategies. It also analyses the complex sequences households follow in utilizing the strategies and the determinants of the sequences.

The second reason why this dissertation research is important is that it deepens our understanding of the intensifying challenges of urban service delivery in the cities of developing countries (UN-Habitat, 2009). This is very important because in the developing countries there is more to service delivery than just having access. Even though households may have access to the services because they are connected to city piped water and/or sewer network, the services are often unreliable due to a variety of problems and are often complemented with alternatives outside the formal sector. Understanding these challenges could help in formulating policies of improving service delivery in our cities.

Third, the provision of basic services such as potable water and sanitation is a central issue in urban planning, healthcare and development, because as citizens reside in different locations within the city their levels of access to the services vary. While the UN has recognized access to water and sanitation as human rights (WHO, 2012) and vital to preservation of life and essential in improving living standard, shortage of the services can compromise health, hinder economic growth and stifle efforts towards poverty reduction (Anand & Ravallion, 1993; Hewett & Montgomery, 2001; Lotfi & Kohsari, 2009). Also, improving access to basic services tend not only to improve a person’s personal situation and well-being but at the same time increase the overall economic and social outcome in the society, as well as in achieving the Millennium Development Goals (MDG) (Kirby, Knox, & Pinch, 1984; WHO, 2012).

Fourth from an equity point of view, provision of basic services should conform to the principles of social justice that involves treating people fairly, which in distributive justice terms means that whatever public goods are being distributed should go to people in the right quantities (Eerd, 2008; Lucy, 1981; Savas, 1978). As such, it is important to investigate how residents cope with the provision of urban services that the Abuja Master Plans recommended equal provision to all districts of the city (IPA, 1979) and as required by the principle of social justice as one of the pillars of sustainable development.
This study is also justified because it informs policies and practices in several ways. First, provision of basic urban services involves spending large amount of public funds annually in infrastructure development and maintenance; as such it is worth investigating to find out the effectiveness of the state in serving the public. Although, the total cost of service infrastructure of Abuja to date is unknown, the Nigerian government has been expending a huge share of the national resources annually on the city. For example, a former Minister of the Federal Capital Territory (FCT) mentioned in 2003 that about $5.3 billion (800 billion Naira) is required annually for four years to extend water and sewer networks to Phase II based on the original Master Plan proposals (ThisDay Newspaper, 2003). As such it is pertinent policy issue to determine whether the investment has resulted into satisfactory service delivery from users’ perspectives.

Second, given that the idea of planned cities like Abuja seems to be reemerging in Africa as satellite cities decant from major metropolitan areas, findings from this study also inform practices by providing the municipality of the planned cities as well as older towns with some policy recommendations on ways to mitigate the challenges with service provision and how to improve on the existing approach of service delivery. For instance, Kaduna State, Nigeria, is currently building new town called ‘Kaduna Millennium City’ adjacent to the state capital with an objective of creating a balanced town, providing housing and basic services, and to spur economic development (www.kadunagis.com/). In the same vein, the existing African new towns are still in the process of development and hence they can still benefit from this study on how to improve the delivery of urban services in the remaining parts of the cities that have not been developed yet. For instance, according to the minister of the FCT, only about 15% of Abuja city has been developed according to Abuja Master Plan as of 2009 (www.allafrica.com).

The justification of using Abuja as a case study is because the city is an exemplary case as it is seen by many as the most successful example of a planned city in Africa (e.g. Abubakar & Doan, 2010). Further, whatever challenges the city is facing in urban service delivery are most likely to exist in other cities of developing countries, considering the oil wealth of Nigeria that allowed significant investment in the city and its image as the capital of the most populous and diverse country in Africa. As such findings from this study are relevant to other cities of the developing countries in guiding policies and practices of urban service delivery.
1.4 Limitations and Assumptions

The geographical scope of the study is the Abuja federal capital city, which covers an area of 256 square kilometers (about 95 square miles). The study area constitutes the inhabited districts within the city boundary (see Figure 3.1). There are satellite settlements outside the city limits but they are beyond the scope of the study because they are not covered by Abuja Master Plan and public services are provided by different local governments.

The functional scope of the study covers the problems households experienced with the delivery of piped water, refuses collection and sanitation services, the strategies employed to cope with the problems with service delivery, the effectiveness of the strategies and factors that influence the choice and efficacy of the strategies. Other public services and infrastructure like electricity, schools, health centers, parks, transportation, housing and electricity are beyond the scope of this research as they need completely separate studies. This study relies mainly on primary data from in-depth structured interviews and personal observations of service facilities by the author as well as review of archive data and documents collected from local utility and planning agencies, libraries and online.

1.5 Organization of the Dissertation

This study adopts the linear-analytic structure of organizing case study research report, which is based on five chronological sections: introduction, literature review, methodology, findings and recommendation, which is highly recommended for academic dissertation or journal articles (Yin, 2009). As such this dissertation adopted this approach but with an addition of a chapter on the background of Abuja and dividing the research findings into two chapters.

The first chapter of the dissertation introduces the dissertation study where the research problems and questions, purpose of the study, its significance and limitations as well as organization of the dissertation were discussed. In the second chapter, the literature review highlights the practice of urban planning and its challenges in the developing countries and then dwells on describing the theories of urban service delivery and underlines the theories that explain how residents respond to dissatisfaction with the provision of urban services.

The third chapter concerns with the research design. It discusses the research questions and proposition, constructs and their measurement, justification for selecting case study research
method, data collection techniques, and data analysis and interpretation. The fourth chapter provides the background on Abuja as a new town and capital city, then the geography, history and planning of the city, as well as the challenges facing the city in growth management and the provision of basic public services. Chapters five and six present the findings of the study. While chapter five discusses households’ coping strategies with unsatisfactory urban services and the efficacy of the strategies, chapter six highlights the factors that influence the choice and efficacy of the strategies and sequences in using the strategies. The last chapter focuses on the study conclusions, implications for theory, methodology and practice, which are then followed by the study recommendations, limitations, future research and summary.
CHAPTER TWO
LITERATURE REVIEW

2.0 Theoretical Context of the Research

This chapter deals with the theoretical foundation of the study, which is primarily informed by three different urban theoretical thematic areas: (a) urban planning and the challenges of managing cities in the developing countries (b) theories of urban services provision and lastly (c) citizen response to dissatisfaction with urban services.

2.1 Urban Planning in the Developing Countries

Urban planning has become a practice of government as well as an activity of ordinary citizens and businesses, and has evolved as a complex set of ideas which guides both planning decision making processes and urban outcomes aimed for achieving particular social, political or environmental objectives (Cooke, 1988; Harper & Stein, 2006; UN-Habitat, 2009). It has been seen as the activity that can solve many of the major problems of urban areas and a significant management tool for dealing with the unprecedented challenges facing 21st-century cities and attaining the goals of sustainable urbanization (Friedmann, 1989; UN-Habitat, 2009). Among the key goals of urban planning is the provision of basic public services such as piped-water, sanitation and garbage collection.

The practice of urban planning in the capitalist western societies has been described as the response by the state and civil society to the imperative of collective action to remedy distortions in urban land-use development and other pathologies of the urban system as well as for managing how and where communities grow. Cities in these societies represent the scene of government intervention to aid capital accumulation by socializing costs of providing necessary social and physical infrastructure such as roads and urban services (Foglesong, 1986). One principal means of doing this is through taxation (income and property) both at the central government and the local level.

However, planning practices in the developing countries differ significantly from what is obtained in the capitalist western societies. First, urban planning emphasizes the role of central
authority to realize the objective of serving collective public interest and creates the perceived moral superiority of state and bureaucracy over market domination in the areas of social life and economic activities (Cook, 1988). Thus, the government, not the market, is the key in shaping urban development. This approach in the developing countries appears unsustainable as municipal governments do not have the financial strength to be responsible for providing housing and basic services to the rapidly growing urban areas (Dibua, 2006; Potts, 1985). By contrast, in the developed world the practice of planning is through collaboration of multiple actors such as the state, realtors, civic societies and communities and basic service infrastructures are provided mainly through a system of taxation and impact fees often charged on developers (Healey, 2003).

Second, while comprehensive plans are amended regularly in the developed world to reflect new planning objectives or policies such as land use changes, such plans in the Third World are very rigid, very ambitious with long-range span and are mostly prepared by experts with focus on objectivity in decision-making and has little regard for local context or public participation (Conyers & Hills, 1984; Friedmann, 1989; Harper & Stein, 2006). Some of the consequences of this approach are that the plans became difficult to implement because of high demand for resources and expertise and the recommendations becoming obsolete with time (Rakodi, 2001). For example, the master plans of all the new capital cities of Africa unrealistically recommended centralized sewer network and piped water connection to all homes and the plans targets are between 20-25 years. Unfortunately is has proven impossible to make accurate and reliable predictions about the future of cities in developing countries due to rapid urban growth and informality (Abubakar & Doan, 2010; Owusu, 2007).

Third, while issues like economic development, environmental challenges (e.g. climate change, pollution, etc), resource redistribution, etc are some of the major focus of urban planning practice in the developed world, planning practices in the developing countries often places more emphasis on physical aspects of the environment (visual order and aesthetics) and uses mostly impractical western standards of urban designs and housing that are inappropriate to local cultures and financial resources (Beauregard, 1991; Mabogunje, 2004). Instead of prioritizing on how to deal with rapid urbanization, urban poverty and provision of basic services, governments and elites in the Third World want their cities to be associated with being modern and with catching up with the West; hence this image has made elaborate master plans attractive because
they wish their cities to be viewed as a symbol of development (Allmendinger, 2001; Dibua, 2006; Watson, 2009). Also, the aggressive promotion of the master plans by developers, consultants and international agencies has also played an important role.

Lastly, planning for housing and basic urban services by the public sector in the Third World cities is typically not based on the ability to pay, rather; it is through an egalitarian provision to achieve an ultimate goal of having a city neither socially nor spatially stratified into ‘money classes’. It is therefore evident why land control was a key requirement of master planning in these regions: not only would it supposedly establish the conditions for a “classless” city (an ultimate political objective), but moreover this would be a city in which “the planner's master plan is the absolute basis of urban order, and the planner its arbiter” (Holston, 1984, p. 26-27). So where do these planning principles originate from and how do they came about in the developing countries? The answer to these questions is the object of the next section.

2.1.1 Origin of Urban Planning in the Developing Countries

Modern urban planning originated in the west as a by-product of scientific and technical progress and it was used as a very direct response to concerns of rapid urbanization, unhealthy and polluted living conditions for the poor, disappearing open green space, and threatened political upheaval in the industrial city (Harper & Stein, 2006; Watson, 2009). It was transferred to developing countries during colonialism mainly to improve community health and general sanitary conditions for the agents of colonial capitalism and that provided the rationale for undertaking limited planning of urban areas (Jenkins, Smith & Wang, 2007).

In Nigeria for instance, planning started with the Township Ordinance of 1917 that gave rise to dual urban centers, the native city and the European Reservation that was based on the principle of racial segregation; citing medical reasons. According to Mabogunje (1990) the native city remained traditional, a largely undifferentiated jumble of mud buildings with poor layouts, generally poor environmental conditions and hardly any infrastructural facilities, whereas the reservations were planned in low density with required amenities and were usually surrounded by a green belt or separated from native areas by natural barriers such as water bodies or hills. These reservations served as the nucleus around which colonial towns, especially colonial administrative centers developed. Another important feature of these towns – a feature
that constituted part of the familiar colonial agenda of “modernizing” what Europeans saw as backward Africans – was the fact that they contained structures that adhered strictly to European architectural and construction standards and using materials such as glass, steel, aluminum roofing sheets, etc (Njoh, 2003).

European colonial authorities created duplicates of European towns in their colonies using planning laws and municipal codes that were simply copies of similar laws in force in Europe. For example, the British colonial authorities drafted Nyasaland’s (present-day, Malawi) 1948 Town Planning Act and Nigeria’s Town Planning Act 1946 after an act of the same name that existed in the United Kingdom since 1932 (Mabogunje, 1990; Njoh, 2003). In this regard, zoning which had been in use in Europe as an instrument for segregating potentially conflicting land uses since the early 1800s was widely adopted all over Africa at the turn of the century. All building activities, including alterations to existing structures, had to be approved by the colonial government by means of granting a building permit (Njoh, 2003).

The master plan, which had already asserted itself as a critical tool in government efforts to regulate and control the growth and development of towns in Europe was also adopted throughout Africa. The task of drawing up and implementing these plans was placed under the charge of teams of colonial architects/planners and public works departments respectively (Conyers & Hills, 1984). Efforts on the part of colonial authorities to achieve their official goal of modernizing Africa went beyond simply regulating and controlling the growth and development of towns but also producing housing for qualified members of the native population resident in the colonial towns. Colonial authorities constructed residential units for their employees and also required that other employers provide housing to their staff. Such direct involvement of the colonial government in the housing delivery system is akin to the well-known concept of public housing that has a long history in Europe and North America (Njoh, 2003).

This section is important as it presents the colonial legacies inherited by developing countries after independence that continues to affect and shape planning practices to date, especially in housing and delivery of urban services. The political elites and wealthy now replaced the colonial masters in the European Reservations or similar segregated neighborhoods, while the poor live mainly live in other neglected areas including slums and squatter settlements. Also, the state assumes the responsibility of providing public housing and services through
centralized planning similar to the era of colonial administration. Next section reviews the major challenges of planning cities in the Third World with particular emphasis on sub-Saharan Africa.

2.1.2 Challenges to Urban Planning in the Developing Countries

The global urban transition witnessed over the last three decades has been phenomenal and is presenting planning and urban management with challenges that they have never faced before. In 2008, for the first time in history, over half of the world’s population lived in urban areas and, according to current projections, this could increase to 70% by 2050 (UN, 2008). A key problem is that most of the rapid urban growth is taking place in the developing countries that are least able to cope – in terms of the ability of governments to provide, or facilitate the provision of urban infrastructure and the ability of urban residents to pay for services. In these countries both land and labor have not been fully commoditized; land is still regulated under various tenure systems while labor still has the option of support through rural links or the pursuit of other subsistent vocations. As such, the local taxation system is generally poorly developed and the resources available to local authorities to provide basic services are therefore usually very modest and grossly inadequate (Mabogunje, 1990).

With the highest average urban growth rate in the world of 3.4% per annum, municipal governments in sub-Saharan Africa have not kept up with the demand for shelter, infrastructure, social services and the cities continue to expand without adequate capacity of the existing infrastructure and services. For example, Gaborone was planned to grow to a maximum of 20,000, but by 2001 the city population of 185,891 accounted for half of the nation’s urban population (Selolwane, 2006). The inevitable result is rundown infrastructure and environmental decay (UNDP, 1997) as well as rapid growth of urban slums and squatter settlements because the public sector cannot provide housing to the rapidly growing population and the people, who are mostly poor, cannot afford housing in the formal market. Accordingly, about 62% of the urban population of sub-Saharan Africa live in these settlements in inequitable and life-threatening conditions, and are directly affected by both environmental and health disasters and social crises, whose frequency and impacts have increased significantly during the last few decades (UN-Habitat, 2009).

Lack of effective management, governance and accountability is also a dimension of urbanization in African that few cities in the continent are exempt from. As such, many urban
residents have looked outside the formal economy and conventional administrative channels to gain access to income, shelter, land or social services through relying on their own ingenuity to stitch together their daily life (Owosu, 2007). The wide range of seemingly unsolvable problems has led some to conclude that cities in Africa just “don’t work”. Others like AbdouMaliq Simone preferred to see them as “work in progress” (Simone, 2004)

Cities of developing countries, apart from poverty, also face problems of social exclusion and inequity, which leads to acute disparity in access to housing and basic services among city residents (Watson, 2009; Werna, 2000). For example, housing development in Gaborone was polarized with low income on one side of the town while the high and medium incomes live on the other (Mosha, 1996). In Lilongwe too, the influence of segregation in what is termed as “apartheid town planning” remains obvious in the clear spatial differentiation between poor and wealthy areas (Englund, 2002). Similar evidence also exist outside Africa. Firman (2004), for instance, asserted that in Jakarta Metropolitan Region centralized master planning has reinforced spatial segregation by polarizing the middle and upper income groups, which results in scattered pockets of exclusive residential areas with the highest security possible and better services for upper middle and high class within the new towns in the region. Similarly, in New Bombay the distribution of households is such that almost four in five households (78.7%) belong to the higher and medium income groups and only 21.3% to the lower income groups (Jacquemin, 1996).

Likewise in Cape Town, South Africa, the approach is directly implicated in worsening poverty, inequality and segregation as several people cannot afford housing except through the informal sector usually in the outskirt of the city where inferior services are provided (Watson, 2009). In Brasilia too, the official city housed about 300,000 people, whereas nearly six times as many are excluded from the city and have to stay in fifteen peripheral and unplanned settlements that lack basic services (Kafkoula, 2009). Also in Lilongwe, up to the year 2003, the high-density residential areas were composed entirely by poor and working class Africans, while the low density areas that have better services house mainly the city’s White and Asian populations and a number of Blacks of high socio-economic status (Myers, 2003).

Further, urban planning in the developing countries is still highly centralized without recourse to local context or local community input in planning matters. As such planning decisions mostly serve the interest of the wealthy and political elites whereas the interests of the
ethnically and culturally diverse citizens, especially the poor, are not well served (Werna, 2009; UN-Habitat, 2009). This supports the opinion that such urban planning policies that are taken to ostensibly promote a collective public interest in reality serve primarily the needs of civic and business elites (Klosterman, 1985). For example, it was reported that there was insignificant community involvement in planning process at grassroots level in Dodoma and in most cases planning was “undertaken by few experts who did not include residents’ priorities” (Norman & Massoi, 2010, p. 318) and as a result, many local problems are unsolved (Lupapa & Lupapa, 2003). According to Mosha (1996), public participation was still not considered good enough in the planning process in Gaborone the public often complain that they were not consulted in planning matters.

Because planning decision makers in cities of developing countries focus on visual order and esthetics, urban and building designs based on unrealistic western standards are proposed. This leads to inevitable growth of slums and squatter settlements because large proportion of the population can’t afford housing in the formal housing market (Hayuma, 1980, UN-Habitat, 2009). For instance, Potts (1985) estimated that by 2001 there would be around 600,000 squatters in Lilongwe. When such slums and squatter settlements do occur, planners consider that they are not in conformance to visual order and often recommend eradication (Kironde, 1993; SERAC, 2006; Watson, 2009). For example, President Banda’s regime ordered the demolition of substantial part of squatter settlements in Lilongwe because they were “too visible” and in conflict with the desire of a garden city (Myers, 2003). Also, Selolwane (2006) stated that in 2001, the Botswana ministry of housing and lands ordered demolition of squatter settlements on tribal lands around Gaborone. As such, Mabogunje (1990) concluded that shantytown development around major cities and the deplorable conditions of housing accommodation for the urban poor soon became a dominant element in the modernization problems of African urbanization.

The previous section presented an argument, which is supported by the literature that centralized urban planning in the developing world with its origin during colonization has contributed to the present challenges of urban planning and delivery of public services in the cities. The next section reviews the theories that explain the factors responsible for different levels of urban service delivery in our cities.
2.2 Provision of Urban Services

Before reviewing the theories of urban service provision, it is pertinent to define the concept of “urban services”, which in this study is also referred to as “public services” and also identify their typology. Baer (1985) defined public service as:

“One which serves the public interest by accomplishing one or more of the following purposes: preserving life, liberty and property; and promoting public enlightenment, happiness, domestic tranquility and the general welfare. It is provided by one or more of the sectors in the economy through government regulation, co-production, or direct provision (p. 886)."

Savas (1978) also considered public service to refer to any of the common and everyday services provided by governments that includes education, police and fire protection, water supply, wastewater collection and treatment, solid-waste collection and disposal, libraries, transportation, recreation services, parks, etc. Public services are categorized into labor and capital intensive. The first are typically recurrent, routine, and easily divisible or even reversible if change is desired in current delivery patterns (Baer, 1985). Examples of these services are police patrols, street cleaning and repair, garbage collection, and housing inspection. While capital intensive services are more typically extraordinary in terms of financing and frequency of provision because they are continual, long-lived, and nonreversible. These include hospitals, schools, roads, water and sewer networks and solid/liquid waste disposal facilities.

2.2.1 Modes of Providing Urban Services

Public services are consumed individually (e.g. piped water connected to homes) or collectively (neighborhood tap, schools, clinics, parks etc), or both (e.g. garbage collection, sewerage) and are classified into networked and point-based services and infrastructure. The networked services are those provided through an infrastructure of physically linked system of pipes or wires like water, sewerage, electricity, telephone and natural gas and are hard to privatize. Whereas, the points-based ones are services provided at a single or multiple locations, but not directly connected by a network such as schools, hospitals, parks, police stations, fire stations, and post office are examples. For both categories, the public sector provides the services mainly in the following ways.
(a) **Monopoly:** A natural monopoly occurs once a service cannot be duplicated in the city (e.g. piped water and sewerage). In most cases, the public sector decides to monopolize the provision of some service that can even be provided by multiple actors (e.g. garbage collection). According to Parks (1999) and Roth (1987), the provision of such infrastructure and the services linked to it can be more cost effective when it is done by one single provider that takes advantage of the economies of scale. However, due to lack of capacity of most municipal agencies in the cities of developing countries to provide services, public authorities often have to designate a private provider to exclusively supply a number of services under a monopoly franchise with specified standards of service and tariffs set by the authority (Roth, 1987).

(b) **Contracts:** Public agencies when faced with limited manpower and technical capacity often contract out the production and/or managing of services to private companies. In management contract, the public agencies retain ownership of productive assets or equipment, but enter into contracts with a private company to manage the service (Hardoy, 2000; Hirsch, 1995). In this situation the public sector usually specifies the nature and level of service which must be provided. However, Roth (1987) identified some limitations of contract, which includes uncompetitive biddings, difficulty with complex contract specification, complex products or services that often lead to incomplete contracts and opportunistic renegotiations and the lack of institutional infrastructure required to monitor contracts.

(c) **Public-Private Partnership:** Due to lack of adequate funds or the inability to serve all parts of the city, municipal authorities often enter into partnerships with the private sector. This emphasizes collaboration between the public and the private sector community-based and non-governmental organizations, the informal sector, etc, for “pluralistic” supply of services (Ahmed & Ali, 2004; Batley, 1996; Koppenjan, 2009; Werna, 2000). Also, consumer cooperatives, which are self-governing voluntary organizations, can provide private services to their members (Thoenen, 2007). The next section briefly highlights the merits and demerits of both public and private provision of urban services.
2.2.2 Public versus Private Provision of Urban Services

Basic urban services are provided mainly by the public sector because they are produced and distributed for the benefit of the whole society, with the assumption that an unregulated market would under-provide (Fisk, Kiesling & Muller, 1978). Some of the key goals of public provision of services is its non-exploitative pricing and non-excludable in its coverage. Similarly, other services are also referred to as “merit goods” – that is everyone should have access regardless of the ability to pay (e.g. water, education and health). Hence, public resources are usually used to finance the construction of the basic infrastructure and facilities that provide the services. The provision of basic services that are delivered through networked infrastructure like water and sanitation also requires huge financial investments that justify government intervention (Roth, 1987). Other characteristics of basic services that support public provision are externalities where people cannot be excluded from benefiting even without paying (e.g. street lights).

However, public provision is criticized for the lack of choice for individuals who have diverse needs, since it focuses on one-size-fits-all mode of provision which does not allow choices from people with higher-income to pay for higher quality services (Thoenen, 2007). Also, public utilities are often inefficient, at times corrupt and public officials may have little incentives to improve the quality of services or respond to consumer complaints (Besley & Ghatak, 2003; Budds & McGranahan, 2003). Also, according to Roth (1987), economists argue that public provision in only suitable in situations of market failure, otherwise private provision is preferred. But, he noted that in a few situations such as when alternatives in the private sector are absent “government failure” may be worse than the market failure.

Whereas, the private sectors provide urban services for the public sector under different schemes such as franchising, management contracts, leasing, joint ventures, etc. Market provision of urban services is supposed to address the limitations of the public sector provision identified in the previous section. Supporters of private provision are of the opinion that markets will maximize the efficiency of service provision in a competitive environment. However, such problems as access, coverage and costs have been identified with the private sector provision. For example, private provision can be limited to few specific geographical areas and too
expensive to the poor (Budds & McGranahan, 2003; Kessler & Alexander, 2004; Werna, 2000). Generally, regardless of the mode of service delivery, in reality inequity often exists among different classes of people or neighborhoods in the city. Therefore, the next section explores the theories and empirical evidences that explain the causes of the inequities in delivering urban services.

### 2.2.3 Theories of Urban Service Delivery

The delivery of urban services occurs on a large scale and affects the daily lives of virtually everyone. Also, as mentioned earlier, the services all have a spatial character; that is, they are either provided through networks (e.g. piped water and sewer) or at facilities that are geographically distributed at certain locations (schools, hospitals). However, provision of urban service is theoretically and empirically found to be influenced by a variety of socio-economic, political and ecological factors. Lineberry (1977) advanced three hypotheses as possible explanations for observing varying levels of public services provision in urban areas. Next section reviews these hypotheses with some empirical evidence that supported them.

**a) The Ecological Hypothesis:** The ecological hypothesis states that:

*The quantity and/or quality of urban services are functions of ecological aspects of urban neighborhoods, including but not limited to their age, density, geographical character, and residential-commercial mix (Lineberry, 1977 p. 67).*

The ecological attributes of a neighborhood influence the distribution of services in several ways. For instance, the physical characteristics of land such as topography, soil type, rocky or swampy terrain, steep slope, etc influence service provision in terms of cost of laying water/sewer pipes, water pressure and these features can also determine suitability of land for parks, schools, hospitals or refuse dumps (Ajwad & Wodon, 2007; McLafferty, 1982). Apart from natural features of an area, ecological attributes can also result from man-made decisions. Characteristics of the build environment such as land use type, urban form, land title, residential density, and location of areas from city center are reported to influence service delivery (Ebo, 2006; Lineberry, 1978; Werna, 2000). For example, the demand for water in industrial zones is quite different from residential areas or office buildings and hence affects the quantity of water
supply to that zone. Similarly, residential districts with high population density may need more elementary schools compared to low density areas.

The influence of ecological factors on service delivery has been supported by empirical studies. For example, a 1971 study of fire and police expenditure allocations in Boston revealed that residential areas that contained relatively large proportions of industrial and commercial activity tended to receive higher allocations compared to those with little commercial uses (Cingranelli, 1981). In another vein, location of household in squatter settlements, gated communities or in the suburban/central districts often influences the levels of service delivery. In many cities of developing countries, residents of squatter settlements are often not provided with services by the government because the settlements are considered illegal. Werna (2000), for example, found that most houses in squatter settlements in Nairobi have no access to piped water and sanitary services and those in Sao Paolo lack educational facilities.

Because provision of networked facilities in many cities of developing countries is outpaced by urban growth due to shortage of funds to invest in infrastructure development, central areas tend to get more adequate services than the periphery. For instance, Werna (2000) found that all wards in the central part of Chittagong (Bangladesh) have dispensaries and are connected with piped water, while the peripheral districts are underserved. Similarly, in their study to explore the adequacy of urban services in Bangkok (Thailand) and Jakarta (Indonesia), Crane & Daniere (1996) found that in both cities, peri-urban and slum areas are the least served in terms of piped water provision. Further, Kafkoula (2009) documented that central Brasilia has better housing and urban services compared with the fifteen peripheral districts. Based on the ecological hypothesis and empirical evidence in the LDCs, households that are located in neighborhood close to the central city where development originated are more likely to have better services compared to those at the periphery or living in squatter areas without land title.

(b) The Underclass Hypotheses: Three hypotheses hold that urban service delivery is influenced by the race or ethnicity, social class (income/education) and political power of the inhabitants of an area and that the urban "underclass" (poor, uneducated and minority ethnic groups) came at the end of the “service stick” (Lineberry, 1977). The description of these hypotheses and empirical evidences supporting them are as follows:
• **The Race [Ethnicity] Preference Hypothesis:** States that:

_The quantity and/or quality of urban services are positively related to the proportion of Anglos [dominant race/ethnicity] in a neighborhood population_ (Lineberry, 1977, p. 66)

Based on this hypothesis, neighborhoods dominated by ethnic/racial minorities are expected to experience lower quality or inadequate services because it is assumed that they lack the resources and organizational skills necessary to ensure bureaucratic responsiveness (Feiock (1986; Lineberry, 1977). Racial or ethnic residential segregation in urban areas is a phenomenon common in both developed and developing countries, which is caused by several reasons such as exclusionary zoning and land use regulations, racial and income prejudices, discriminatory attitudes by housing and mortgage markets (Anas, 2004). According to Short (2006) and Ihlandfeldt (1999), residential segregation often results in discrimination and exclusion if households are implicitly and explicitly forced to live in certain areas where their opportunities for housing, employment, security and public services are constrained. However, urban planning in the developing countries mostly presume that by centralized control of land and urban development, housing and urban services will be provided by the state to all citizens based on objective criteria (Holston, 1984).

Results from studies that tested this hypothesis were inconclusive. For instance, Lovrich and Taylor (1976) found a statistically significant difference in the ratings of public services (fire and police protection, parks, public transportation and street maintenance) among high- and low-income Anglos in Denver, even though they could not find any statistical difference among the high- and low-income Blacks and Mexican Americans. But another study by Bolotin and Cingranelli (1983) that analyzed the distribution of police services in 145 tracts in Boston found that Blacks received lower level of police services (measured as police expenditure) per capita, while controlling for crime rate and voting for the city mayor in the previous election. Kelly and Swindell (2002b) also studied citizen satisfaction with 6 public services from 96 neighborhoods in 12 US cities and found that neighborhoods dominated by Blacks and Hispanics recorded lower level of satisfaction with fire, EMS, trash collection and police but more satisfied with parks than the areas dominated by Whites.

These contradictory findings indicated that more research is needed in this area as it is not yet fully established whether areas dominated by people from the dominant ethnic/racial
groups receive better urban services than those dominated by minority races or ethnic groups. As such a non-quantitative research may be able to resolve some of these contradictions.

- **The Class Preference Hypothesis:** States that:

  *The quantity and/or quality of urban services are positively related to the proportion of the neighborhood population which is of higher socio-economic status* (Lineberry, 1977, p. 66).

People with higher income and education tend to segregate themselves by fleeing from “blight” to live in exclusive neighborhoods, thereby leaving the underclass (poor or uneducated households) constrained to living in some certain parts of the city where services are poor (Harrison, 1982). As such, gated communities have now become popular in cities of developing countries where the elite build private residential areas that are provided with better services than the remaining parts of the cities (Firman, 2004). According to Adama (2005), the metropolitan authorities in the developing countries when faced with limited budgets, provide better services in neighborhoods inhabited by the rich than areas dominated by the poor.

Empirical studies on the influence of income on the distribution of urban services also produced mixed results. A number of empirical studies have indeed supported the hypothesis and found evidence of inequality in urban service distribution based on income. For instance, Werna (2000) found that the administrative division of Langata in Nairobi has the largest concentration of low-income people and it is the most under-serviced division in the city, with only one health facility per 80,000 residents (p. 58). Using a questionnaire survey, Erkip (1997) established that high income households in Ankara have higher rate of parks utilization, which is strongly and negatively associated with distance (i.e. lowest utilization for parks with maximum distance). The implication of this finding is that poor households, without means of transportation, may not be able to utilize the recreation services. In a similar vein, Kelly and Swindell (2002b) found that in a few US cities, neighborhoods inhabited by mostly poor households are less satisfied with police services and emergency medical services than areas with wealthier residents. Medina (1999) concluded that neighborhoods dominated by low income citizens are among the areas where municipal waste collection often does not exist in several cities of developing countries.

Surprisingly, some studies found the exact opposite: neighborhoods with the majority of high-income residents receive lower levels of services than those with high percentage of low-
incomes. For example, it is found that high-income residential areas in Boston receive lower levels of police services, measured as expenditure per residential areas, than predominantly low-income areas in 1970 (Bolotin & Cingranelli, 1983). Similarly, Lotfi and Koohsari (2009) found that in zone 6, Tehran, neighborhoods with high level of deprivation (measured through a composite index of socio-economic variables of income, unemployment rate, private car ownership, and the quality of buildings in census blocks) have higher accessibility (98% of the population) to public parks, stores and primary schools than those with low deprivation. This contradiction was explained by Lee (1994) who felt that because there is high need for services in low income or ethnic minority neighborhoods, those areas are likely to receive higher level of some types of services.

In a study that is somewhat at the middle course, Duffy (2000) compared residents ratings of forty public services in 44 most deprived local authorities with other local areas in England and found that there are few (only four out of forty) and small differences in satisfaction with services between deprived and other areas, and these are even less notable after controlling for differences in the demographic profile of residents between areas. Accordingly, one can argue that a qualitative or mixed method may be a better approach to research this contradiction since most of these studies used survey methods.

- **The Power Elite Hypothesis:** States that:

  The quantity and/or quality of urban services are positively related to the proportion of the neighborhood population occupying positions of power in urban government’ (Lineberry, 1977, p. 66).

Power elites, the people occupying positions of power in government, are not scattered randomly in urban areas; they tend to cluster in various specific areas and influence service delivery to their advantage. In the developing countries, it is very common to find Government Residential Areas, senior staff quarters, low-cost housing and other public housing, which are known to house senior government officials. Because of the use of social capital to influence decisions in the public sector, the provision of services is perceived to support this hypothesis where service distribution favors areas that are dominated by the elites such as top government officials, politicians, military personnel, university professors, etc. (Ebo, 2006).
Adama (2005) accused the urban governments in developing countries of being elitist, concerned primarily with providing services to those who are well off. Therefore, an important issue to explore would be the extent to which the power elites influence the delivery of urban services because it is the public sector where the elites typically work that is responsible for service provision. For example, the author experienced several occasions when water tankers from public utility agency brought water to his neighbor’s house whenever there was outage. This enabled other households to fill their buckets and cans, courtesy of a senior staff of the agency whose father lived in the neighborhood.

There are also empirical studies that found the influence of power elites on the distribution of services. In their study of distributional patterns of police expenditure in Boston, Bolotin and Cingranelli (1983) found that residential neighborhoods with high turnout and voter support for the mayor in the previous election receive higher police expenditures per capita than do others. Similarly, Mabogunje (1990) reported that in the cities of Lagos, Kano and Bauchi in Nigeria, senior civil servants and other members of the elite account for more than 90% of land and housing under public management, even though they constitute less than 20% of the adult population of the cities.

(c) Bureaucratic Decision Rule Hypothesis: States that:

*The quantity and/or quality of urban services are primarily functions of bureaucratic decision-rules made to simplify complex allocations of administrative time and resources (Lineberry, 1977, p. 66).*

Bureaucratic decision rules could be regulatory, which are mostly written, as in budgetary allocations, zoning ordinance, building standards, etc and they greatly influence how services are distributed in cities (Meier, Stewart & England, 1991). For instance, financial resources allocated to a utility agency determine the extent of its ability to extend its services to new neighborhoods. The decision rules could also be discretionary decisions that planners or officials of utility agencies take in discharging their routine responsibilities. For example, response to user complaints about services is at the discretion of utility officials to determine which complaints are more urgent and thus require immediate attention. Through the firm bureaucratic rules and flexible discretions, an unequal allocation of public goods like delivery of services between areas
may result from assigning priorities to different groups based on the distribution criteria of a state. Typically, public bureaucrats devise ways to allocate resources to different classes of “publics”, which bias the process of distributing services thereby producing a pattern of systematic social and economic inequality (Lineberry, 1977).

Baer (1985) believed that the role of bureaucrats is the major determinant of accessibility to public services. He argued that it is now generally agreed that among all theories that explain the delivery of urban service, the bureaucratic decision rules largely account for varying service levels and distribution patterns in urban areas. There are also empirical studies that supported this hypothesis. Werna (2000) found that in Nairobi, Chittagong and Sao Paolo, municipal decisions led to duplication of services in some areas and deficiency in others. Harrison (1982) concluded that defective pattern of local government organization and finance can lead to inter-jurisdictional differences in the distribution of public service. An interesting issue worthy of study is that since Abuja is a planned city and its master plan recommended equal provision of urban services to all districts and the bureaucrats are entrusted to implement those proposals, so would they make discretionary decisions that are against the proposals of the master plans?

2.2.4 Key Findings on the Patterns of Urban Services Delivery

This section summarizes the key findings on factors influencing the patterns of urban service distribution. As we have seen from some empirical studies (Table 2.1), there is consensus that both power elite and bureaucratic decisions influence the delivery of urban services, which often led to inequity (Miranda & Tunyavong, 1994). However, the studies that tested the race and class hypotheses are inconclusive and they often contradicted the hypotheses, so we can conclude studies that neighborhoods that are predominantly inhabited by the poor or the rich and those dominated by people from the majority or minority ethnic groups are favored in the delivery of services in some cases and in other instances they are not.

This contradictory finding confirmed what Lineberry (1977) called “unpatterned inequality” in his study of urban service distribution in San Antonio, where he found that the pattern of service distribution, across the city, is certainly not equal but unequal in unsystematic way. As such, further studies are thus needed to explore the reasons behind this contradiction.
Table 2.1: Summary of major studies on the patterns of urban service delivery

<table>
<thead>
<tr>
<th>Study</th>
<th>Aim of the research</th>
<th>Method</th>
<th>Key findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bolotin &amp; Cingranelli</td>
<td>Assess the distribution of police services in 145 tracts in Boston using expenditure as a measure of services distribution</td>
<td>Analyzed 1970 survey data using Pearson correlations and regression analysis</td>
<td>Large minority population is associated with lower level of service per capita. Voting is positively associated with police expenditures per capita.</td>
</tr>
<tr>
<td>Crane &amp; Daniere</td>
<td>Explore the adequacy of urban services in Bangkok and Jakarta using a proposed new taxonomy of infrastructure access indicators</td>
<td>Survey of 512 and 500 households in Bangkok slums and north and west Jakarta respectively</td>
<td>24.4% and 56.5% of household in Bangkok and north and west Jakarta respectively obtained water for drinking and cooking from vendors, rain or river</td>
</tr>
<tr>
<td>Duffy (2000)</td>
<td>Analyses residents’ ratings of 40 public services in 44 most deprived local authorities in England</td>
<td>4376 observations from England’s National Survey. Logit analysis used for data analysis</td>
<td>There are few and insignificant differences in satisfaction with services between residents of deprived (poor) and other areas</td>
</tr>
<tr>
<td>Erkip (1997)</td>
<td>Evaluate service utilization and user characteristic of parks and recreational facilities in Ankara, Turkey</td>
<td>Questionnaire survey using quota sampling of households. Chi-square was used for the analysis</td>
<td>Higher rate of service utilization as income increases. Demographic and housing tenure have no relationship with utilization of parks</td>
</tr>
<tr>
<td>Kelly &amp; Swindell (2002b)</td>
<td>Evaluate citizen satisfaction with 6 public services from 96 neighborhoods in 12 US cities</td>
<td>Telephone and mail surveys conducted between 1993-2000 and data analyzed using descriptive statistics and regression analysis</td>
<td>Minority concentrated areas are less satisfied with fire, EMS, trash collection and police but more satisfied with parks. Less wealthy areas are less satisfied with police services and EMS than more wealthy.</td>
</tr>
<tr>
<td>Werna (2000)</td>
<td>Study the relationship between urban management and the unequal pattern of provision of urban services in Nairobi, Sao Paolo and Chittagong</td>
<td>Comparative case studies of Nairobi, Chittagong and Sao Paolo using interviews, surveys and review of official documents</td>
<td>Living in mainly low-income, squatter or non-central neighborhoods is negatively associated with the quantity of health facilities, piped water sanitary and educational facilities provided</td>
</tr>
</tbody>
</table>

2.2.5 Basic Public Services: Why do they Matter?

According to Baer (1985), public services are vital to the preservation of life (drinking water, sanitation and public health, security and fire fighting), public enlightenment (schools, libraries), pursuit of happiness (parks and recreation), promotion of the general welfare (streets and transportation, social services) and domestic tranquility (housing and environmental protection). The combination of safe drinking water and hygienic sanitation facilities is a
precondition for health and for success in the fight against poverty, hunger, child deaths and
gender inequality and it is also central to the human rights and personal dignity of every woman,
man and child on earth (WHO, 2004). In addition, the efficient disposal of municipal solid and
liquid wastes is critical in maintaining the quality of urban life (Doan, 1998).

Improper solid and liquid waste disposals such as emptying of sewage into drainage
channels or on land and dumping refuse by the road side, inside water bodies and/or on
uncompleted buildings and vacant plots pollutes the environment and harbors rodents and flies.
These practices expose people to health risks apart from bad odor, emission and risk of fire from
refuse burning. For instance, disposal of human waste into water bodies could lead to spread of
water-borne diseases like as cholera, typhoid and diarrhea. According to WHO, due to absence
of improved sanitation and safe drinking water, more than 3,900 children under five are dying
every day, while others suffer from poor health, diminished productivity and missed
opportunities for education (WHO, 2004, p. 6).

In the recently released report by UNICEF/WHO, “progress on drinking water and
sanitation 2012”, UN Secretary General announced that at the end of 2010 the world has
achieved the MDG number 7, target 7C for drinking water but not for sanitation. The target aims
to halve the population of households without sustainable access to safe drinking water and
improved sanitation by 2015 (WHO, 2012). While a number of low-income countries in Latin
America and Asia have made tremendous gains in expanding water and sanitation services, there
is slow progress in sub-Saharan Africa in general. For instance, in Nigeria, only 34% of urban
dwellers have access to improved sanitation facilities; one percent higher than the average
coverage in sub-Saharan Africa (WHO, 2012, p. 48). Obstacles to accelerating the rate of
progress meeting the MDG goals in the region of Africa include high rates of population growth,
and low priority given to water and sanitation (WHO, 2012).

In conclusion, provision of basic urban services like piped water, refuse collection and
sanitation are very important requirements for a healthy and productive society. However, as
highlighted in the previous section, various physical, socio-economic and bureaucratic factors
among others influence who gets what services, how much and when. Accordingly, certain areas
in a city such as poor neighborhoods, slums and squatter settlements lack basic urban services or
get inadequate/poor quality services that often lead to health problems and lower social and
economic productivity. Therefore, when such problems in service delivery exist in a city of
developing countries, what should we expect the residents of the city to do in response? This is important because utilizing some response strategies has health implication not only to those households using them but the society at large. Second, employing certain strategies reduces households’ level of productivity as time and money is expended. Third, some strategies impart negatively on the delivery of the existing public services as they are not mean to improve the services but they rather harm their provision. The next section reviews the theoretical model that hypothesizes the likely response of citizens if they are dissatisfied with a product or service together with a number of empirical studies that applied the model.

2.3 Response to Unsatisfactory Delivery of Urban Services

Theoretically, households respond to unsatisfactory situations via one or a combination of more than one of the four main strategies of *Exit, Voice, Loyalty* and *Neglect*, in what is popularly known as the EVLN model (Lyons and Lowery, 1986). The framework was originally developed by Hisrchmann (1970) when he hypothesized that consumers respond to decline in firms, organizations and states through *Exit, Voice and Loyalty* (EVL model). His assumption was that the performance of a firm or an organization is subject to deterioration when its product or service quality absolutely or comparatively deteriorated.

As such, users resort to exit, which involves any action by which an individual terminates her status as a customer, member or constituent – stops buying the firm’s product or leaves an organization, which results in a drop in revenue and decline of membership that may compel management to search for ways and means of correcting whatever faults have led to exit. Voice is broadly construed as individual or collective expression of dissatisfaction to management or higher authority of service/product provider through complaints, general protests, etc. Loyalty encompasses passively staying with an unsatisfactory situation in the expectation that someone will act or something will happened to improve the situation (Hirschmann, 1970). His model was later extended to explain customer responses to a wide variety of situations including urban service provision (Young, 1974).
2.3.1 The Exit, Voice, Loyalty and Neglect (EVLN) Model

Rusbult, Zembrodt and Gunn (1982) extended the Hirschman’s model (by adding Neglect) into four sets of responses to dissatisfaction with a situation, which they initially tested within the context of romantic relationships between individuals. In the framework, exit is leaving a relationship (e.g. separation, divorce), while voice refers to discussing problems with the partner or others and seeking help for reconciliation. Whereas, loyalty involves waiting for the situation to improve and neglect connotes putting in less effort or doing nothing and developing negative attitudes to the situation. They also categorized these responses into two dimensions. Voice and loyalty strategies are called “constructive” responses, because they are generally intended to maintain or revive the relationship, whereas exit and neglect were considered to be “destructive” as they are not meant to revive the decline of the situation. Another dimension is that voice and exit are regarded as “active” responses (something is being done) and loyalty and neglect are thought of as “passive” (do nothing) responses.

The EVLN model was further expanded by Lyons and Lowery (1986) and applied it to explain variations in responses to dissatisfaction with policies of urban communities. The following section discusses the four response strategies under the EVLN model by highlighting the major assumptions of each and its applications within the context of urban service provision.

![Figure 2.1: The EVLN Framework (Source: Lyons & Lowery, 1986, p. 331)](image)
(a) Exit: This is regarded as a market mechanism for showing dissatisfaction with service delivery and it includes changing jurisdiction to where service provision is better (Tiebout, 1959) or exiting to a rival service provider (Young, 1974; Dowding et al, 2000). According to Tiebout model, higher income households have incentives to sort themselves into local jurisdictions within a metropolitan area by voting with their feet to articulate their preferences for local public services in return for the property tax they pay. In the framework developed by Lyons and Lowery (1986), exit strategies are regarded as both active and destructive responses to dissatisfaction (Figure 2.2). Active because action is involved and destructive because the service provider was left with no means of knowing what causes dissatisfaction so that service can be improved. Another reason it is considered destructive is that massive exit can lead to decline or death of the service provider, which would eventually reduce competition and might eventually lead to monopoly.

Dowding and John (2008) modified the EVLN model by splitting exit into two. First, the Tiebout-exit, which occurs when a household moves from the jurisdiction of one public provider to that of another such as changing county or school district because of better schools. Second, the provider-exit is where citizens move from one service provider to another – such as moving from public sector services altogether to private sector (like transferring one’s children from a public school to a private one) or switching from public to public or private to private service providers like changing ones’ healthcare from the one private hospital to another (Young, 1974).

Quasi-exit is another form of exit originally coined by Lehman-Wilzig (1991) that applies to creating an alternative supply of public goods through possibly “extra-legal” means rather than employing voice or exit. This type of exit is temporary when complete exit is impossible in a monopoly provision of essential services and then options like buying water from private vendors or paying an informal waste collector to evacuate garbage are taken while still remaining with the primary service provider. However, EVLN studies on quasi-exit are very scarce because these alternatives are very rare in developed countries were such studies concentrate. Further, it is very interesting to assess the effectiveness of these alternative services as response strategies to dissatisfaction with service delivery.

Campbell et al, (2007) classified customers into two: alert, those who might respond more quickly to service quality decline (mostly wealthy and educated) through voice or exit, and
inert customers who do not. They too regard exit to be destructive because if the alert consumers chose to move out, then the inert ones would be left behind and have to suffer the consequences of low quality services because they could not afford to exit. As such, growing exit would create an underclass of the inert families who would continue to experience poor services and would therefore be “locked-in” unable to exit, and have little incentive to voice probably because of “feelings in inadequacy, alienation or inefficacy” (p. 3). Young (1974) believed that service performance can be improved through exit by tying the financial or other rewards of producers to the levels of consumer patronage attracted. But this seems to be more applicable to a market economy like US where there is competition for more customers by the private service providers.

Lyons and Lowery (1989) and Young (1974) are of the opinion that exit is more likely in situations where the quality of the output is easier for users to observe and evaluate, the economies of scale do not prohibit multiple sources of supply, the costs of investigating alternatives or switching service providers are low and there is absence of tangible investments (e.g. home), social capital (friends and relatives) or sentiment that may discourage individuals from exit. In cities of developing countries where services are mostly centralized and provided by the public, one may expect more of quasi-exit than Tiebout-exit: for example all the residential districts in Abuja are served by the same utility agencies via a monopoly.

Empirical studies on exit strategies as a response to dissatisfaction with urban services are inconclusive. A few indicate positive association between dissatisfaction and exit and others negative. Using a survey data of 685 Chicago residents, a study Devereux and Weisbrod (2006) suggested that dissatisfaction with police and parks are the important determinants of intention to move, rather than satisfaction with garbage collection or street maintenance. Individuals who are “somewhat” or “very satisfied” with police or are “very satisfied” with parks are significantly less likely to express an intention to move.

Likewise, an internet survey of 9500 users of public healthcare and education services in UK found that citizens who have stayed longer in their neighborhoods or can name more neighbors (social capital) seem to make Tiebout-exit less likely than those whose length of stay is less and can name less neighbors (Campbell et al, 2007). This probably implies that those households consider the benefit of exit as not worth the cost of losing their social capital. In a survey to determine household responses to water supply problems, Acey (2008) found that 40% and 15% of respondents that indicated being dissatisfied with water supply, respectively, in
Lagos and Benin City in Nigeria used quasi-exit strategies of building their boreholes or purchasing water from vendors.

Similar evidence of these kinds of exits also exists in Asia. Through a survey of households, Crane and Daniere (1996) found that 24.4% of household in Bangkok slums and 56.5% in north and west Jakarta obtained water for drinking and cooking from vendors, rain or river. In Delhi India, a survey to assess household coping strategies with unreliable water supply found that 63.1% of respondents stored water, 16.5% have boreholes in their homes and only 1.5% have changed residence or intended to do so due to water supply problems (Zerah, 2000). However, since 79.2% of the respondents in this study are homeowners, the low percentage of those that exited might have been skewed by owners who are less likely to change residence than the renters. A better approach is to report the percentages of both to see if there is any influence of tenure on exit.

(b) Voice: These are regarded as non-market strategies like complaints and community pressure to get better services (Mladenka, 1989; Sharp 1986). Hirschman (1970, p. 30) considered voice as a political rather than market strategy that attempts to change but not to flee from a situation through individual or collective appeal to the management directly in charge or higher authority, including those that are meant to mobilize public opinion, with the intention of getting improved situation. He asserted that alternatives must be available to make voice strategies more effective. Rusbult et al, (1982) and Lyons and Lowery (1989) considered voice to be a constructive strategy, rather than destructive, because it provides feedback to the provider of services so that performance can be improved. It can also be regarded as a warning to the provider for a possibility of exit if issues that are causing dissatisfaction are not addressed.

Dowding et al (2000) made a distinction between two forms of voices, which they called individual voice and collective voice. The first composed of complaints to service provider, public official, elected representative, etc, about goods or services provided to households in order to improve the services by engaging in activities such as writing letter or verbal complaint to media, etc. The collective voice, on the other hand, consists of actions by neighbors, community development organization, etc when they act together to bring about the desired improvement on services performance. Later, Dowding and John (2008) divided the collective voice further into two: collective voice through voting when voting is used to complain about
services (voting in a referendum or against an elected council on the grounds of poor services, or against a government for its record on public services); and *collective voice through joint action* like lobbying, joining and campaigning through a pressure group, signing a petition, going on a march, which might be used to defend particular service provider based on satisfaction with their services or to attack unsatisfactory service provision.

Within the context of developing countries, Werna (2000) found that because urban services are mostly provided by the public sector, there are other kinds of voice responses that came from the providers of the services. One is internal pressure from co-workers and supervisors that can improve service performance and the other voice is from external organizational pressure, where the higher ministry or mayor office can query the service agency to improve its performance. It is generally believed that using voice strategy is known to be affected by the socio-economic status of an individual, since more educated people are regarded to be more vocal than less educated. Campbell et al (2007) posited that if the alert customers voiced their complaints and had some effect upon service quality then the inert consumers would also benefit from that activity.

On the empirical studies that investigated the relationship between dissatisfaction with urban services and voice, a study by Devereux and Weisbrod (2006) found that increased consumer satisfaction is strongly associated with decreased probability of a complaint about services. They also found that people who are satisfied with garbage and streets are significantly less likely to voice than those that are very dissatisfied, and no one among the “very satisfied” with police services complains about the services. However, dissatisfaction does not always lead to voice because only 1% of residents that are “very dissatisfied” about parks complained about it (Devereux & Weisbrod, 2006).

In some EVLN studies in developing countries there seems to be rare utilization of voice strategy. In Lagos for instance, Acey (2008) found that only 17% of respondents that reported being dissatisfied with public water supply voiced their dissatisfaction to the state utility board. While in Delhi, Zerah (2000) found that only 12% of households complained about poor supply of public piped water. One of the reasons for this finding might include a culture that does not support standing up to the authorities or lack of awareness of one’s rights, which are difficult to discover in survey designs. In another vein, prior EVLN studies have not gone further to assess how constructive (effective) voice strategies are in improving the performance of urban services?
(c) **Loyalty**: Refers to a strategy of remaining with a service, organization, employment, or situation without exiting or voicing due to loyalty to one’s job, neighborhood, and investments or because of political/ethnic affiliation even though the user, member or employee is unsatisfied. Hirschman originally posited that loyalty is an unobservable psychological variable that mediates between exit and voice by discouraging exit and promoting voice so that dissatisfied users just reluctantly stay with a service/product hoping that the situation would improve. But in the EVLN model, it is considered as a behavioral response that is an alternative to exit and voice and not just complementary (Campbell et al, 2007). It is described as a situation where dissatisfied households remain with unsatisfactory services, without exit or voice, due to a variety reasons such as lack of alternatives, or because of tangible investment like homes that service users don’t want to lose. Loyalty could also mean refusing to change residence due to sentiments and social ties to neighborhood like being born and brought up there, or having family and friends. It also refers to not complaining about services because of employment in the city or same party/ethnic affiliation with the city leaders (Dowding, John, Mergoupis, & vanVugt, 2000; Dowding & John, 2008; Sharp, 1984).

It is pertinent to distinguish the two very different forms of loyalty: loyalty as response to dissatisfaction and loyalty as the default condition of the satisfied citizen. Loyalty as support on the part of the satisfied citizen is a conceptually distinct behavior from that as a response to dissatisfaction in the EVLN model. When citizens are satisfied with city services, type of loyalty of the good citizenship such as paying utility bills and taxes promptly, feeling of trust to the city, praising the utility agencies, etc would be expected to be a default form of behavior separate from the EVLN responses to dissatisfaction (Lyons & Lowery, 1989). Thus, if the approach in urban service delivery is effective in Abuja, one could expect more of loyalty of satisfaction from the residents of the city rather than the EVLN loyalty.

Various empirical studies found evidence of EVLN loyalty as a response strategy to urban services provision. Acey (2008) reported that 19% and 37% of the residents dissatisfied with piped water in Lagos and Benin cities respectively, responded through passive loyalty by waiting patiently and hoping that the problem will go away without employing either exit or voice strategies. Hirschman (1980) opined that the presence of alternatives would tend to reduce levels of loyalty as users have the choices of exiting or voicing their dissatisfaction. However,
findings by Lyons and Lowery (1989) indicated that in some communities with higher number of alternatives, households have shown more loyalty to their local jurisdiction than communities that have fewer alternatives. This could mean that even in the presence of alternatives, high satisfaction level can increase loyalty rather than promote exit or voice.

(d) **Neglect:** This response involves ignoring a situation or problem by doing nothing to improve the situation or solve the problem. The neglect responses have been described as such behaviors as apathy, cynicism that the government has no impact on people’s lives, refusing to vote in an election or discharging other civic duties and distrust with the municipal officials (Lyons & Lowery, 1989; Rusbult et al, 1982). Neglect differs from passive loyalty in that it is not directed at improving the performance of the services; rather, the individual responding with neglect implicitly accepts that improvement is not going to happen (Withey & Cooper 1989). For dissatisfaction with urban services in developing countries, the kind of neglect responses expected might include lack of commitment to pay utility bills, not reporting busted pipes and leaks and other actions that are aimed at not improving the situation but rather to worsen it. That is why Lyons and Lowery (1989) categorized neglect as a destructive response in their framework in Figure 2.2.

Evidence suggests that neglect could be the most rarely used option to respond to dissatisfaction with basic services. Acey (2008), for instance found that only 2% and 1% of households in Lagos and Benin city respectively employed neglect strategies to their dissatisfaction with water provision by not paying bills or reporting busted pipes. Thus, it is imperative to explore whether in the cities of developing countries, citizens will neglect a situation where bureaucrats favors some districts over others or where social capital is used to get better services. Table 2.3 below summarizes a few of the major EVLN studies.

### 2.3.2: Key Finding of the Major EVLN Studies

One of the key findings from reviewing the EVLN studies in Table 2.2 is that Tiebout-exit is the least likely utilized response strategy and it is unlikely with higher level of investment (e.g. homeownership) in a neighborhood. Another key finding is that quasi-exit is predominant in the Third World, while voice is highly associated with dissatisfaction with services in the
developing countries probably as a result of availability of channels for reporting problems (emails, phones, etc).

<table>
<thead>
<tr>
<th>Study</th>
<th>Aim of the research</th>
<th>Method</th>
<th>Key findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acey (2008)</td>
<td>Assess neighborhood effects on household responses to public piped-water supply problems in Lagos and Benin city in Nigeria.</td>
<td>Survey of 389 households in 10 neighborhoods. Used descriptive statistics for analysis</td>
<td>40% of dissatisfied households in Lagos exited, 17% voiced, 19% showed loyalty and 2% employed neglect. In Benin City: 15% exited, 37% voiced, 37% showed loyalty and 1% neglected the problems</td>
</tr>
<tr>
<td>Campbell, Dowding &amp; John (2007)</td>
<td>Measure satisfaction of consumers with education and health care services, past and future intentions about voice and exit behavior in Scotland &amp; Wales</td>
<td>Survey of 9500 internet users. Structural equation modeling and factor analysis were used for data analysis</td>
<td>Social investment (or loyalty) seemed to make Tiebout-exit less likely but more likely to voice collectively. Collective voice has a positive relation to exit rather than the negative one</td>
</tr>
<tr>
<td>Crane &amp; Daniere (1996)</td>
<td>Explore household experiences with water and sanitation services in Bangkok slums and north and west Jakarta</td>
<td>Survey of 512 and 500 households in Bangkok and Jakarta respectively in 1993</td>
<td>24.4% of respondents in Bangkok slums and 56.5% in north and west Jakarta obtained water for drinking and cooking from vendors, rain or river</td>
</tr>
<tr>
<td>Lyons &amp; Lowery (1989)</td>
<td>Measure citizen responses to public service dissatisfaction in Louisville-Jefferson and Lexington-Fayette Counties in Kentucky</td>
<td>Survey of 2,016 households from 10 communities. Data analyzed using multiple regression</td>
<td>Households with high levels of investment, all other things being equal, were more likely to exercise Voice and Loyalty when faced with dissatisfaction.</td>
</tr>
<tr>
<td>Devereux &amp; Weisbrod (2006)</td>
<td>Assess the implications of citizen dissatisfaction with police, street maintenance, parks, and trash collection services on the use of voice or decision to exit in Chicago</td>
<td>Survey data of 685 residents carried out by the Northwestern University Survey Laboratory. Used descriptive statistics and Probit analysis</td>
<td>“Dissatisfied” respondents were more likely to voice and plan to exit. Increased satisfaction is strongly associated with decreased voice. 20% of “very dissatisfied” respondents complained about garbage collection</td>
</tr>
<tr>
<td>Dowding &amp; John (2008)</td>
<td>Evaluate citizen satisfaction with public services and individual exit decisions in UK</td>
<td>Online survey of 9500 public service users. Data was analyzed using descriptive statistics, OLS and Probit models</td>
<td>Dissatisfaction was highly associated with complaint and collective voice but it has weak relationship with Tiebout-exit. Dissatisfaction with education and health correlated with exit from the public to private sectors</td>
</tr>
<tr>
<td>Zerah, 2000</td>
<td>Assess household strategies for coping with unreliable water supply in Delhi, India</td>
<td>Survey of 700 households from 4 residential zones. Data analyzed using Logit model</td>
<td>63.1% of respondents stored water, 16.5% drilled boreholes, 11.9% complained and 1.5% changed residence or intended to due to water-related problems</td>
</tr>
</tbody>
</table>
Dowding et al. (2000, p. 482) mentioned that the exiting EVLN studies have “all” used cross-sectional survey designs, making it impossible to establish any temporal differences in the use of the four response strategies (see Table 2.2). For example, do people try voicing first, and then resort to exit when their voice is unsuccessful? They suggested that these issues deserve further research attention. Therefore, a study that would use qualitative research design or a case study is required to address some of these limitations.

2.3.3 The Determinants of Exit, Voice, Loyalty and Neglect Responses

The EVLN strategies are employed singly or jointly and they have different efficiency as mechanisms of recuperation of firms or organizations (Lyons & Lowery, 1989). In some situations voice precedes exit strategy and vice versa. Dissatisfied users may choose to voice, and then if they are still not satisfied with the organizational response, they may then choose to exit at a later date (Hirschman, 1970). It is also possible for people to decide to exit and then voice from outside. However, they are not mutually exclusive alternatives since people may exit and voice simultaneously. Lyons and Lowery (1989) argued that voice can and should complement and occasionally supersede exit as a recuperation mechanism when business firms, public services, and other organizations deteriorate.

Rusbult and Farrell (1983) proposed three conditions posited to affect the likelihood of a citizen engaging in behaviors or attitudes associated with the four types of responses to dissatisfaction. First, citizens with few investments in a community (e.g. homeownership and friends) are more likely to invoke the exit and neglect responses. Second, those who were satisfied in the past are expected to choose some form of positive response of voice or loyalty or if dissatisfied they may use destructive responses of exit or neglect. Prior experience with the efficacy of particular response or the possibility that it will be effective in improving the performance of the services matters in selecting which response strategy to use. The third consideration in deciding which response approach to take is cost of employing any of the alternative approaches. Lyons and Lowery (1986, p. 334) added a fourth factor that affect the choice of response strategies, which is the level of current dissatisfaction. They are of the opinion that the more severe dissatisfaction is the more likely people undertaking the more destructive responses like exit.
Withey and Cooper (1989) are of the opinion that the costs that affect the choice of any response strategies are time and energy required to be expanded on them. They argued that if the cost of leaving one’s neighborhood (moving expenses, loosing friends, etc) is worth the better services available in other areas, then dissatisfied household would exit, otherwise they may stay and use voice or neglect. The authors also posit that the possibility of improvement in the services or users believe that their actions can improve the situation, would more likely result to the constructive rather than the destructive responses.

This section is very relevant to this study because it helps us understand the possible coping strategies that households in Abuja might utilize in response to discontent with service provision and the likely factors that might affect their choice of strategies. It is also pertinent as it helped in developing constructs that guided the design of the study. Thus, the propositions of this study are derived from this section as explained in the next chapter on design.
CHAPTER THREE
RESEARCH DESIGN

3.0 Chapter Overview

A research design is a logical plan that guides a researcher from research questions to the process of collecting, analyzing and interpreting data and to drawing some inferences and conclusions. This dissertation used a single case study of a contemporary phenomenon of urban service delivery that involves collecting and analysis data from multiple sources (Yin, 2009). This chapter is structured based on the components of case study design. It begins by underlining the research questions and propositions. Then it explains the study constructs and how they were measured and the justification for choosing a case study method. Description of data collection techniques then follows. For each technique, the section explains the type and sources of data collected, how the data was collected and its usefulness in the study. Then the chapter discusses the method of data analysis and the logic linking data to study proposition. Lastly, it highlights the criteria for interpreting the research findings.

3.1 Research Questions and Propositions

The following are the four research questions and propositions that guided the study and they are discussed below. These propositions are developed from the EVLN model and they provide the criteria of interpreting the research findings. The answers to the research questions are based on the extent to which the findings correspond with the propositions.

3.1.1 Question One:

“How do residents of a planned city of a developing country cope with unsatisfactory urban services”?

Propositions: This study expects that households in Abuja city respond to the problems with the provision of urban services using several coping strategies including exit, voice, loyalty and neglect. For example, a household may use exit strategy by moving to other districts (Tiebout, 1956) or seek services from alternative providers (Young, 1976) like buying water
from private vendors or calling private waste pickers to collect refuse. Employing voice strategy might be individual or collective complaints to relevant authorities for dissatisfaction with the services. Loyalty means refusing to leave a service or neighborhood or declining to voice even though citizens are dissatisfied with the services due to sentiments to neighborhood or loyalty to friends and assets. For instance, a family might decide not to complain about poor water quality not necessarily because they are satisfied with the water but because they work for the city government. Neglect could be not caring about what happened to the services. Where residential mobility is limited and service provision is a monopoly, with very little choices, citizens ignore a problem and allow it to deteriorate. Further, this study expects some of these strategies to be utilized more than others depending on the type of services involved and other circumstances.

3.1.2 Question Two:

“To what extent are the strategies effective for coping with unsatisfactory urban services”?

Propositions: We would expect that some strategies to be more effective than others as alternative coping strategies (quasi-exit) or as means of improving the performance of existing public service (voice). According to Lyons and Lowery (1989), response strategies have different efficacy levels. For example, a household might choose to employ informal garbage collectors because they are more effective than complaining to public utility agencies in getting garbage disposed on time. Similarly, in some instances collectively complaining about problems with urban services could be more effective than a households reporting individually. The efficacy of a coping strategy could also means the convenience in utilizing the strategy and how timely it is in solving a problem or whether the alternative is safe, health wise.

3.1.3 Question Three:

“What factors influence the choice and efficacy of the coping strategies”?

Proposition: We would expect that several socioeconomic conditions such as income, political power and education of households and other factors to influence the choice and the efficacy of strategy used in response to unsatisfactory urban services provision in Abuja city.
Campbell et al (2007) felt that citizens with higher social investments (e.g. friends, relatives, etc) are more likely than those with lower social capital to voice collectively rather than individually. They also suggested that service users with high SES would tend to employ more of voice and exit strategies than people with low SES who, most likely, lack organizational skills necessary to insure bureaucratic responsiveness or the resources required to exit. Similarly, Withey and Cooper (1989) proposed that the costs involved in undertaking a strategy (time and money), citizens investments in a community, past experience of whether a particular response has been effective or not and users’ belief that their actions can improve the situation affect the likelihood in which citizens engage any of the four types of responses strategies.

3.1.4 Question Four:

“Are there any sequence in utilizing the coping strategies”? 

**Proposition:** This study expects some sequences in the ways the coping strategies are employed and also expects that there are reasons behind the sequence. However, the sequence may vary from one household to another and from one service to the other (Lyons & Lowery, 1989). For example, some households might initially neglect a problem until its magnitude increases then they would complain to the utility agencies. And then later when the problem was still not solved and the situation became unbearable, such households might decide to obtain alternative services from the informal sector or to relocate to another area. Others might start with reporting a problem to the relevant agency and then later neglect the problem when the voice is unsuccessful and they could not leave their neighborhood to another area.

3.2 Constructs and their Measurement

This section presents how the author measured eight constructs used in the study. The constructs have already been defined in chapter two. Hence, only brief descriptions of the constructs are presented before explaining how they were measured. For exit strategies, this study used three kinds of concepts (Tiebout, provider and quasi exits) and for voice two kinds (collective and individual) were used. Loyalty has been categorized into that of dissatisfaction (EVLN loyalty) and loyalty of satisfaction. This differentiation is relevant for policy implications.
as the first type of loyalty indicate the aspects of services that have problems while the letter for areas that are okay. The last construct is neglect. These constructs were measured as follows.

■ Tiebout-exit: This is leaving a service jurisdiction to where services are better (Tiebout, 1959). For the purpose of this study, all services are provided under a single jurisdiction, which is the FCDA. However, Tiebout-exit in Abuja is possible because of the variation in quality of services among different parts of the city as prior studies have identified. Therefore, it was measured as relocating from one phase to another or from one residential district to the other. Intention to change district/phase due to problems with service delivery was also considered.

■ Provider-exit: Connotes to changing service provider permanently to a rival (Young, 1976). In Abuja refuse collection has been contracted out to some private companies assigned to various districts (Imam et al, 2008). Similarly, author’s experience indicated that maintenance services are provided by either the public utility agencies or through the private options. Moreover, there could be possibility of changing sanitation from public sewer to private septic system and vice-versa. Hence, changing a refuse collection company, maintenance service provider or sanitation system are measures for provider-exit used in this study.

■ Quasi-exit: Refers to creating temporary alternative supply of essential public services through “extra-legal” means outside the formal system when complete exit is impossible in a monopoly (Lehman-Wilzig, 1991). This study used water vendors, borehole, water storage and fetching water from other sources like rain/rivers and neighbors to measure quasi-exit for water supply. In the case of refuse collection, the use of informal garbage collectors or self to dispose garbage is the measures for quasi-exit. Quasi-exit for sanitation is possible when a home has a pit latrine in addition to WC connected to sewer system so that the first can be used temporarily when the latter is not functioning before repairing it.

■ Individual Voice: Means complain by individual households about service-related problems (Lyons & Lowery, 1989). For measuring this voice response, this study asked questions about voice strategies employed individually by respondents that are aimed at solving local problems through contacting officials, attending meetings and demonstration, talking to neighbors and belonging to neighborhood organizations that work towards improving urban services.

■ Collective Voice: The collective voice, on the other hand, consists of actions by neighbors, community development organization, etc when they act together to bring about the
desired improvement on services performance (Dowding et al, 2000). It was measured as collective appeal to the management in charge of service delivery or higher authority, including those that are meant to mobilize public opinion with the intention of getting improved services, complaints to elected representative, signing or circulating petitions, writing letters or verbal complaint to media, etc.

- Loyalty of Dissatisfaction: EVLN loyalty means waiting for the situation to improve without exit or voice, due to a variety reasons such as loyalty to families/friends and tangible investment like homes that service users don’t want to lose (Lyons & Lowery, 1989). It was measured as refusing to change residence due to homeownership, sentiments and social ties to neighborhood or having family and friends or not complaining about services because of employment in the city or similar party/ethnic affiliation with the city leaders. Other measures are defending the state or service provider for their inefficiency, faith that problems will work out, a belief in the honesty of local officials, and a feeling that citizens are often too quick to blame local officials when things go wrong (Campbell et al, 2007).

- Loyalty of Satisfaction: This kind of loyalty is the default form of satisfied households with service delivery. The measures used include explicit and implicit statement that service delivery is satisfactory or good. Examples are lack of problems with service delivery, satisfaction with the quantity or quality of service as reported by respondents. Other measures are feeling of trust to the city and praises for appreciating the services of the utility agencies or the success of voice in solving problems.

- Neglect: This indicates putting in less effort or doing nothing and developing negative attitudes to the situation (Rusbult et al, 1982). It was measured as refusing to report or address problems like busted pipes and leaks, lack of commitment to pay utility bills, and other actions that are aimed at not improving the situation but rather to worsen it. Other measures used are users not caring about what is going on with service delivery, their opinion that one can't fight the state and believing that it is useless to complain to officials (Lyons & Lowery, 1986).

Thus, this study used these constructs as guides in developing interview protocol and codes during data analysis. After describing the research questions and propositions, constructs and their measurement, the next section discusses the case study research design in details starting with the justification for using a case study.
3.3 Justification for Case Study Design

The choice for a case study is due to the type of the questions (‘how’) this study investigates: how do citizens respond to dissatisfaction with the delivery of urban services and how effective are the response strategies? Also, the social phenomenon under investigation – provision of urban services – is a context dependent and contemporary activity and as such a case study is the most suitable design for the research. Using multiple sources of evidence that includes interviews, observation and review of documents in this case study to develop converging lines of inquiry (triangulation) from both the secondary and primary data, complementing each other, will make it possible to address broader issues and enhance the construct validity (certainty that what we measure reflect the situation or changes we study) of the findings of the study. Further, the author’s several years of experience working on the review of Abuja Master Plan supports the choice of case study as it requires knowledge of the study environment.

Yin (2009) argued that through triangulation research findings and conclusions are likely to be more convincing and accurate and such studies are considered to have higher overall quality and triangulation is now considered a common feature of all good research. In the same vein, since qualitative methods are from the interpretivist epistemological view of the world where knowledge is produced through the interaction of the study subject and the researcher, it enables the study of complex process and discovery (Flyvbjerg, 2001). Therefore, combining evidences from several sources in this case study makes it stronger by benefitting from the strength of each source and also enhances the plausibility of its findings (Yin, 2009). This is necessary because narrow views of the world are often misleading, and approaching a subject from different perspectives may help to gain a holistic perspective.

Similarly, one data collection method may have particular strengths with respect to only some particular types of question, so using data from different sources in this study helps in getting deeper perceptive of urban service provision within a rapidly-growing city of a developing country. The qualitative research puts the researcher closer to service delivery so that “thick and rich” descriptions of the phenomenon is conveyed to readers from the vantage point of the people studied (Lofland, Snow, Anderson, & Lofland, 2006).
3.4 Data Collection Techniques

This study uses three data collection techniques. The primary data was collected via semi-structured interviews (guided by a protocol) with sixty households and direct observation of the condition of service facilities. The third technique was archiving and documentation of secondary data such as reports, maps, records etc collected from Abuja public agencies, libraries, internet, etc. A sample size of sixty is considered adequate for qualitative interviews (Marczyk, DeMatteo, & Festinger, 2000) and because of the principle of “less is more” in qualitative methods (McCracken, 1998). The details of the techniques for data collection, the data sources and types of the data collected are described as follows.

3.4.1 Semi-Structured Personal Interviews

Before conducting the interviews, an interview protocol (Appendix A) consisting of open-ended questions was developed, which allowed the interviewees to describe their experience with service delivery by themselves or what is called the law of non-direction (McCracken, 1998). The interview protocol of this study was developed based on three groups of interviews questions recommended by Lofland et al (2006). First, “grand tour” questions asked about how the respondents experience the delivery of water, refuse collection and sanitation services in their residences and neighborhoods and the problems associated with the phenomenon. Second, how the respondents cope with the problems, that is how the coping strategies were organized (structured) and operates overtime (process) and third, what factors accounted for the occurrence or development of the coping strategies (causes) and what conditions affects the strategies (consequences). Follow-up questions were also asked interviewees to clarify points and provide more details on the answers provided. After developing the interview guide, interviewees were selected using the following procedure.

(a) Sampling of Districts and Respondents: Twelve residential districts where service delivery is perceived to be poor in Abuja (Figure 3.1) were selected based on review of literature, authors’ knowledge of the city and consultation with local officials. Of the five fully-developed residential districts in Phase I, Asokoro, Garki and Wuse were selected. In Phase II, five out of the eight inhabited districts were selected: Jabi, Utako, Kado, Gudu and Guduwa. Four districts were selected in Phase III: Gwarimpa; Life Camp; Lokogoma; and Nbora. While the first two have been fully developed, the last two are still undergoing development.
Then a total of sixty households were sampled from these twelve districts (range: 3-8) using key informants and snowball techniques simultaneously. First, key informants were identified (community leaders and families that have lived in Abuja for more than 20 years) and twenty six agreed to participate in the study. They were recruited by author’s contacts – staff working in the planning department of Abuja and friends. We would expect these informants to provide rich and diverse perspective based on their longtime experience of living in the city or through leadership of their communities. Initial contact by phone was made with the informants after the researcher arrived at the study site and interviews were scheduled at their convenience. Eventually, as a result of attrition, fifteen key informants participated – eight community or
residents’ association leaders and seven families that lived in their neighborhoods for more than 20 years. The other eleven recruits were not interviewed because five changed their minds and declined to participate and six could not be reached on phone or missed the appointments and were not able to reschedule.

Second, in the snowball technique, after each of the key informants was interviewed, she/he was asked to recommend other households who he/she thinks share different opinion about the issues asked in the interview and the next recruit was in turn asked to recommend another until all the sixty interviews were conducted. The interviewed respondents provided the telephone number of a colleague, friend, and/or neighbor as a potential study participant who has been told about the purpose of the study and has agreed to partake in the research. Then the investigator contacted the recruits and scheduled interviews. Some recruits declined to participate in the study and they were replaced by others since more than one potential subjects were recommended by interviewees. The next section describes the interview setting and ethics considered in conducting the interviews.

(b) Interview Setting: The interviews often took place in front of homes under a tree, at fast food restaurants, or any convenient locations, etc. This is common in African culture and as such there was no intrusion of privacy. Other respondents granted the interviews in their offices or places of businesses and this is expected for a city whose residents are mostly workers in the public or private sectors. The interviews mostly took place in the evening after 5 PM on work days and at various times on weekends. This choice of time by households is probably because in Nigeria and other tropical countries, the summer months of May-July are less hot in the evening and people commonly sit outdoors to chat with friend and neighbors, walk around, etc.

• Cultural Considerations: Planning is a moral craft with ethical consideration that should be effectively guided by knowledge of the various values and culture of the society we are planning for. Therefore, several cultural accommodations were made in the manner to which the questions were asked so that they are regarded as culturally appropriate by the respondents. This author observed the extant socio-cultural norms of the society the research was conducted as much as possible because he belongs to the culture. One consideration was showing respect for elders by speaking in low tone and the other is avoiding asking questions on personal issues. These considerations have helped in getting respondents’ cooperation and ease of interviews.
(c) The Interviews: Face-to-face interviews with head or delegated adult member of the selected households took place between May and July 2011 that lasted between 21 and 58 minutes. The interviews were semi-structured – guided by an interview protocol approved by FSU Institutional Review Board (see appendix A). The purpose of the interviews was to provide closer understanding of households’ experience of the delivery of urban services and how they respond to unsatisfactory service provision. Interview sessions started with an introductory opening about the author, purpose of the study and the voluntary nature of participating in the study. According to McCracken (1998) the opening of an interview is very important in the long interview process. The author also tried to gain the confidence of subjects and created an atmosphere of “face-safety” that helped them felt at ease. Showing the author’s ID as a student also helped tremendously in making him more acceptable to the study subjects.

The permissions of all respondents have been sought and the interviews were recorded using a digital voice recorder. All interviewees were given the option of the author using pen and paper to record the interviews if they were not comfortable with using the audio recorder, but they all agreed to record their responses. Signed inform consent for participation in the study were obtained from all participants. The author ensured that interviewees understood that the purpose of the study was purely academic and that the interview recordings would be used exclusively for that purpose and would be destroyed (erased) when the study is concluded. The introduction letter collected by the researcher from his department was helpful in establishing the authenticity of the purpose of the study. Anonymity and confidentiality of the respondents were also completely guaranteed and participants were made aware that they could stop the interviews at any point without a given reason (see the consent form in appendix B). Respondents are described by their districts in this dissertation.

(d) General Characteristics of the Sampled Districts and Interview Participants

Table 3.1 summarizes the characteristics of the 60 interviewees and the residential district they live. There were more males (44) than females (16) in the sample. The respondents’ length of stay ranged from 1 to 28 years with an average of eight years. Most of the subjects (38) were workers in the public sector. Seventeen participants were living in bungalows, and the remaining forty three were living in apartment housing. A little over half of the respondents (32) were
renters. The sample had the highest number of households living in Phase I (23), and then Phase II (20) and the remaining 17 participants were living in Phase III of the city.

Table 3.1 Characteristics of interview participants and sampled districts

<table>
<thead>
<tr>
<th>District</th>
<th>Respondents (n = 60)</th>
<th>Female (n = 16)</th>
<th>Occupancy (Renters) n = 32</th>
<th>Mean length of stay (years)</th>
<th>Housing Type</th>
<th>Income level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase I</td>
<td>23</td>
<td>7</td>
<td>12</td>
<td>13</td>
<td>4 Bng, 19 Apt</td>
<td></td>
</tr>
<tr>
<td>Asokoro</td>
<td>6</td>
<td>2</td>
<td>4</td>
<td>10</td>
<td>2 Bng, 4 Apt</td>
<td>High</td>
</tr>
<tr>
<td>Garki</td>
<td>9</td>
<td>4</td>
<td>5</td>
<td>14</td>
<td>0 Bng, 9 Apt</td>
<td>Medium</td>
</tr>
<tr>
<td>Wuse</td>
<td>8</td>
<td>1</td>
<td>3</td>
<td>11</td>
<td>2 Bng, 6 Apt</td>
<td>Medium to high</td>
</tr>
<tr>
<td>Phase II</td>
<td>20</td>
<td>4</td>
<td>14</td>
<td>6</td>
<td>3 Bng, 17 Apt</td>
<td></td>
</tr>
<tr>
<td>Jabi</td>
<td>4</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>1 Bng, 3 Apt</td>
<td>High</td>
</tr>
<tr>
<td>Kado</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>7</td>
<td>0 Bng, 3 Apt</td>
<td>Medium</td>
</tr>
<tr>
<td>Gaduwa</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>1 Bng, 2 Apt</td>
<td>Medium</td>
</tr>
<tr>
<td>Utako</td>
<td>7</td>
<td>2</td>
<td>7</td>
<td>6</td>
<td>1 Bng, 6 Apt</td>
<td>Low to medium</td>
</tr>
<tr>
<td>Gudu</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>8</td>
<td>0 Bng, 3 Apt</td>
<td>Medium</td>
</tr>
<tr>
<td>Phase III</td>
<td>17</td>
<td>5</td>
<td>6</td>
<td>8</td>
<td>10 Bng, 7 Apt</td>
<td></td>
</tr>
<tr>
<td>Life Camp</td>
<td>6</td>
<td>0</td>
<td>1</td>
<td>16</td>
<td>4 Bng, 2 Apt</td>
<td>Medium to high</td>
</tr>
<tr>
<td>Gwarimpa</td>
<td>5</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>1 Bng, 4 Apt</td>
<td>Medium</td>
</tr>
<tr>
<td>Lokogoma</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>3 Bng, 0 Apt</td>
<td>Low to medium</td>
</tr>
<tr>
<td>Nbora</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>2 Bng, 1 Apt</td>
<td>Medium</td>
</tr>
</tbody>
</table>

Note: Bng = bungalow, Apt = Apartment

In terms of the sampled residential districts, three (Asokoro, Wuse and Garki) are in Phase I. Asokoro is a low density residential district dominated by elites (wealthy people and politicians), while Garki is a medium density area that is inhabited predominantly by middle class and Wuse has a mix of low density single family dwellings occupied by the rich (Wuse II) and high density area with mostly multi-family apartments (Wuse I). The sampled districts in Phase II were Kado, Jabi, Utako, Gudu and Gaduwa, and the first three have been fully developed. The districts range from low- to medium-income areas and they are typically high density residences inhabited by middle to low income people. Respondents from Utako are mostly workers in the informal sector, while those from Jabi and Kado are public employees. Those respondents from Gudu and Gaduwa districts appear to be of medium income.

In Phase III, the districts of Gwarimpa I, Life Camp (or Gwarimpa II), Lokogoma and Nbora were selected. The first two have been fully developed as medium density residential areas, the first to house the workers involved in constructing the city and the latter for mass
public housing by the federal government. Lifecamp is inhabited by senior civil servant of FCT while Gwarimpa I houses have been sold to the public and as such contains a mix of both medium and high income employees of both public and private sectors. Lokogoma and Nabora districts were mainly estates developed by private realtors and contain mainly middle class families. In these twelve and other districts in Abuja, this and prior studied did not find evidence of ethnic segregation in Abuja. Therefore, ethnicity is not reported in Table 3.1. The most important variables in this study are districts, occupancy, housing type and income level. Length of stay reflects how old the districts are as well as the richness of respondents’ experience.

3.4.2 Direct Observations

Personal observations of the condition of basic service facilities and infrastructure such as water taps and tanks, sewer pipes, refuse bins and garbage collections process were done. What the author did is often called ‘windshield survey’, where he drove a car around the city and observed the physical conditions of service facilities and took photographs using a digital camera and notes down information that is not captured by the camera. Similarly, activities related to service provision such as solid waste collection, water vending etc were also observed and documented and presented in this dissertation as figures.

3.4.3 Archiving and Documentation

Archival records and official documents such as public reports, statistics and maps from government agencies responsible for the provision of the services and the development of Abuja have been retrieved and investigated. These agencies are Federal Capital Development Agency, Abuja Municipal Management Agency, Abuja Environmental Protection Board and Abuja Water Board. The author has friends and network of contacts that facilitated access to the required data during field work. Similarly, academic journals, text books and news articles from Nigerian electronic mass media have served as an invaluable source of secondary resources. Particularly for this study, important secondary data include the Master Plan of Abuja (IPA, 1979), final report of the review of the Abuja master plan: socioeconomic survey (Benna Associates, 2009) and technical reports from the World Health Organization and UN-Habitat, the Nigeria Demographic and Health Survey 2008 (NPC, 2009). According to Yin (2009), the
most important use of these types of data is to corroborate and augment evidence from the primary sources (i.e. interviews and direct observations).

3.5 Data Analysis and Interpretation

After the interviews, the digital audio files were transferred to a PC, played back slowly and fully transcribed using pseudo names to hide the identity of the respondents. The transcripts were then analyzed using Grounded Analysis (Glaser & Strauss, 1967) as follows:

3.5.1 Data Analysis

The analysis of the verbatim transcripts of the interviews was done using Grounded Analysis. This technique of qualitative analysis provides a means of developing theory based on a close relationship between data collection, data analysis and the resulting theory that evolves from the analysis (Corbin & Strauss, 2008). It emphasizes capturing the complexity of the context in which actions unfold. Three basic stages of this method – open coding, axial coding and selective coding – were employed to make sense out of the data and to generate some theoretical construct (in this case coping strategies) that respondents employed to cope with unsatisfactory provision of water, refuse collection and sanitation services. Through the analysis, the sequences in utilizing the strategies and the factors that influence the choice and efficacy of the coping strategies also emanate. These stages are explained in detail as follows:

(a) **Open Coding:** In order to derive and develop concepts from the data, the analysis started by coding the transcribed data into actions, conditions and consequences and then grouped the codes into a family of codes for each of the three concept labels. This first stage of grounded analysis was facilitated with the use of Atlas Ti© software. Using the software, the various coping strategies and sequences in choosing the strategies are coded into actions, the efficacies (pros and cons) of the strategies are coded into consequences, while the factors that affect their choice and efficacy and are coded into conditions.

(b) **Axial coding:** The second stage analyzed these families of the codes to find the connections between actions and consequences in terms of their relationships, cause and effects patterns, and sequences. Diagrams and arrows were used to visually represent the relationship
between the various coping strategies and the factors/conditions that influence their choice. This analytical process was again refined iteratively through a systematic comparison between data and the concepts and patterns identified during the analysis.

(c) Selective coding: This involved building a story that connects and integrates the categories of codes. This consisted of iteration through the data to confirm the story or find new angle until saturation was reached. Three theoretical and one methodological memos were also developed and used in guiding and enriching this final stage of the analysis (Lofland, et al, 2006). This stage of analysis was done to dig through the data to discover the hidden treasures contained within, not merely scratching the surface.

Throughout the analysis, data was grouped together and conceptually labeled, the concepts were then categorized, linked, organized by relationships and conditions and dimensions developed, and finally different themes have emerged, which were categorized into the exit, voice, loyalty and neglect strategies for each of the three services studied. Likewise, the efficacy of the strategies come to light based on the advantages and disadvantages of each strategy as reported by respondents as well as the factors that influence the choice of each strategy and sequences in the use of the strategies. Data from personal observation and review of documents were used to triangulate the findings from the grounded analysis.

3.5.2 The Logic of Linking Data to Proposition

The themes that came out from the data analysis were linked to the propositions related to each research questions through a general analytical strategy known as “pattern-matching”. Using this method, the author measured the extent to which the propositions made based on the EVLN model prior to the interviews were supported by the data collected during the interviews. The specific logic of this strategy is to compare the expected pattern of research propositions with the actual pattern that emerged from the findings of the grounded analysis. Then based on the extent to which the pattern matched, the propositions were supported using the criteria explained in the next section.
3.5.3 Criteria for Interpreting the Research Findings

Using the themes that emerged from the data analysis, the research propositions were supported by the study based on: (a) how often a strategy is utilized by respondents, for question one; (b) the efficacy level of a strategy, for questions two; (c) how influential a factor is on the coping strategies, for questions three; and (d) the various sequences of strategies utilized by respondents for questions four. The following section explains in details the criteria of how the author interprets the findings to support the research propositions. The criteria and the classification were ultimately a judgment decision.

(a) Utilization Levels: This study uses rudimentary counting to measure the extent to which households utilize a strategy or sequence, which is one of the general practices in qualitative studies (Corbin and Strauss, 2008). In question one, the study proposes that households would utilize various strategies to cope with problems with service delivery. As such, the number of households that stated that they utilized a coping strategy was used to interpret the utilization level of that strategy.

Similarly, in question three, the factors that influence the coping strategies are presumed to have different level of influence and as such, the number of households who mentioned a factor was interpreted as the level of influence of that factor on the strategies. Also, in question four, households are propositioned to use different sequences in choosing the coping strategies and thus the number of sequence is also used to measure the utilization level of sequence.

(b) Efficacy Levels: Question two proposes that some strategies would be more effective than others for coping with unreliable services (quasi-exit strategies) or as means for improving the performance of existing public services (voice strategies). Therefore, the extent of the efficacy of the strategies was subjectively analyzed and categorized into high, moderate, or low levels for each of the strategies based on the following three evaluation criteria (self-reported by respondents):

(a) the success of the strategy in solving a problem;
(b) the costs (money and time) of employing the strategy;
(c) The convenience in exercising the strategy.
For strategies that involve utilizing water and sanitation from alternative sources (quasi-exit), the WHO (2012) classification of improved and unimproved sources of water and sanitation services (Table 3.1) is used as the third criteria while convenience is merged into the cost of utilizing a strategy (second criteria). The details of how the author interpreted the efficacy levels of the strategies are presented next.

Table 3.2: WHO Classification of drinking water and sanitation sources (WHO, 2012, p. 32)

<table>
<thead>
<tr>
<th>Drinking Water</th>
<th>Sanitation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Improved</strong></td>
<td>Use of:</td>
</tr>
<tr>
<td>• Piped water into dwelling, yard or plot</td>
<td>• Flush or pour-flush to:</td>
</tr>
<tr>
<td>• Public tap or standpipe</td>
<td>○ Piped sewer system</td>
</tr>
<tr>
<td>• Tubewell or borehole</td>
<td>○ septic tank</td>
</tr>
<tr>
<td>• Protected spring</td>
<td>○ Pit latrine</td>
</tr>
<tr>
<td>• Protected dug well</td>
<td>• Ventilated Improve Pit (VIP) Latrine</td>
</tr>
<tr>
<td>• Rainwater collection</td>
<td>• Pit Latrine with slab</td>
</tr>
<tr>
<td></td>
<td>• Composting toilet</td>
</tr>
<tr>
<td><strong>Unimproved</strong></td>
<td>Use of:</td>
</tr>
<tr>
<td>• Unprotected dug well</td>
<td>○ Flush or pour-flush to elsewhere (i.e. not to piped sewer system, septic tank or Pit latrine)</td>
</tr>
<tr>
<td>• Unprotected spring</td>
<td>• Pit latrine without slab, or open pit</td>
</tr>
<tr>
<td>• Cart with small tank or drum</td>
<td>• Bucket</td>
</tr>
<tr>
<td>• Tanker truck</td>
<td>• Hanging latrine or hanging toilet</td>
</tr>
<tr>
<td>• Surface water (river, dam, lake, pond, stream, canal, irrigation channel)</td>
<td>• Shared or public facilities of any type</td>
</tr>
<tr>
<td>• Bottled water (considered to be improved only when the household use drinking water from an improved source for cooking and personal hygiene)</td>
<td>• No facilities, bush or field (open defecation)</td>
</tr>
</tbody>
</table>

- **High Efficacy**: For the efficacy level of a strategy to be high, we should expect the strategy to satisfy all the three evaluation criteria. Thus, it should be a successful coping strategy in addressing a problem, with moderate or low cost, convenient to those exercising it and classified as an improved alternative water/sanitation services, if it is a quasi-exit strategy.

- **Moderate Efficacy**: Moderately effective strategies are expected to satisfy any two of the three criteria. That is a strategy should be successful in getting problems addressed, being improved alternative source of drinking water and sanitation (for quasi-exit strategies) but costly and inconvenient. It could also refer to strategies that are rarely successful in fixing problems but
are cheap and convenient to employ and from improved sources of water and sanitation. Or it connotes such strategies that are often successful, but cheap and convenient and from improved sources.

- **Low Efficacy**: Low efficacy means a strategy satisfies only one or none of the three criteria. This entails expensive and inconvenient strategy, rarely successful but is an improved source of drinking water and sanitation (if it is a quasi-exit strategy). It could also refer to cheap and convenient coping strategy from improved sources of drinking water and sanitation but unsuccessful means of solving a problem. It also refers to expensive and inconvenient coping strategies that are from unimproved sources of drinking water and sanitation but often successful in addressing a problem.
CHAPTER FOUR
BACKGROUND ON ABUJA

4.0 Prologue

This chapter introduces the concepts of new towns and capital city because Abuja is both and then highlights the geography and historical background of the city and its planning process. It also focuses on the physical development of the city, challenges the city is facing and the approach in the provision of basic urban services.

4.0.1 New Town

A new town is a comprehensively planned and relatively independent community, usually built from scratch, large enough to support a range of housing types and public facilities and to provide social and cultural opportunities within its borders and for the employment of its residents (Stowe & Rehfuss, 1975). One of the principal objectives of a new town is solve the social, economic and environmental problems of cities by providing adequate housing and services (Jacquemin, 1996; Kafkoula, 2009; Ziari, 2006). It is constructed as a stand-alone settlement as in the case of Abuja or as a twin city adjacent to an existing city like New Bombay in India. The design of new town originated from the ideas of urban visionaries like Le Corbusier in the 1920s and 1930s of an ideal city, which are highly influential globally and still shapes planning in many parts of the world (Scott, 1998; Watson, 2009). For Le Corbusier, an ideal city should be neat, ordered and efficient. He considered slums, narrow streets and mixed use areas as undesirable and should be demolished and replaced with efficient transportation corridors, residences in the form of tower blocks with open space “flowing” between them, and land uses separated into “mono-functional zones” (UN-Habitat, 2009, p. 10).

New town planning originated in Britain from the ideas of Howard’s Garden City and continued on a wider scale in Europe and to the wider world. It represents an attempt to recreate village life in the urban context through bringing green to the cities in response to industrial pollution and overcrowding in Europe (Merlin, 1980). As can be seen in figure 1, a prototype Garden City recommended low density development; populations of 32,000 people, about 1,000
acres of build up areas and 5,000 acres of agricultural land, open spaces and wide roads. Also, residences are separated from work places through strict separation of land uses, thus, controlling the size, form and growth of the city (Christensen, 1986; Watson, 2009).

Figure 4.1: Howard’s Garden City model (Source: Rockey, 1983, p. 98)

In a new town, planners have an ample opportunity to use their expert’s knowledge to rationally and comprehensively plan the city using western design on a clean slate without many hindrances from dealing with an existing settlement. These western design standards are quite glaring in the design of planned cities in the developing countries. For example, 16% of land in Dodoma Master Plan was earmarked for transportation and parking alone and other generous proportion of space for gardens and recreation grounds (Siebolds & Steinberg, 1981). According to Keiner and Cevric (2006), the Master Plan of Gaborone was also characterized by a comparatively low-density form of development based on the “Garden City” model with provision of substantial land for pedestrian walkways and open spaces. In the case of Lilongwe,
Potts (1985) mentioned that the government in Lilongwe was also committed to creating a garden city image where parks and low density were prioritized.

The goals of the Garden City, according to Watson (2009) were two-fold: social—the recreation of a traditional way of life, which was essentially anti-urban but was seen as preferable to the “chaos” of the industrial city; and aesthetic—bringing the beauty of the countryside into the towns, in the interests of both physical and mental health. These utopian visions, over time, shaped planning processes and practices in Western Europe and the USA. In the Britain for instance, new towns were committed to self-containment through jobs creation and provision of full social amenities equally between different social classes (Kafkoula, 2009). In developing countries, several new towns like Abuja also serve as national capitals. For this reason, the next section discusses the concept of capital city and its functions.

4.0.2 Capital City

A capital city is a place where in the political authority of a territorial unit is concentrated; it is the seat of the legislature, the headquarters of the executives, exercising a higher or lower degree of supervision over local administration according to the structure of the government and it is often, although not invariably, the cultural focus of the country (Gordon, 2006). The primary functions of a capital city are political, administrative and cultural, but not really commercial or industrial (Obateru, 2004). In Africa, capital cities have special status and portray an image of development to the outside world. This status creates a bias in which the level of resource investments in the capital cities is higher than smaller towns and other non-capital cities (Njoh, 2003). Because of the centralized system of administration, most functions of the national government take place at the capital and several people perceive capital cities as having abundant opportunities for employment. This perception brings about the influx of immigrants from various regions to the capital cities in search of these expected opportunities.

Abuja and other new capital cities of Africa were established to replace the former capitals that are often the commercial capitals of the nations and primate cities. National unity, political and strategic reasons, growth center role or centrality are often the objectives for

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2 The issue of whether the new capital cities have achieved these objectives has been covered in Abubakar and Doan (2010).
locating the capitals (Christopher, 1985; Hamdan, 1964; Schatz, 2003). Because Abuja is also a national capital, there is also a strong role of the state authority in the delivery of public goods like housing and urban services to achieve the goal of social change. Similarly, as Abuja is planned from relatively vacant land with very few settlements, the new town vision of having a beautiful, orderly and well-landscaped city with state-of-the-art buildings can be realized. Considering these points, one can argue that Abuja is a classical example of a planned city.

4.1 Geographical Background of Abuja

Abuja city is part of the Federal Capital Territory (FCT), which is located in the central part of Nigeria north of the confluence of the Niger and Benue Rivers (see Figure 4.1). Bordering the FCT are states of Kaduna to the northeast, Nasarawa to the east and south, Kogi to the southwest, and Niger to the west and northwest. The territory covers 2,824 square miles (7,315 square km), which is two and half times the size of Lagos, the former federal capital of Nigeria. Abuja's geography and its very character are defined by the two renowned rock formations around it— the Zuma Rock from which the FCT begins at its base and the Aso Rock, a tall monolith located at the head of Abuja city, restricting its growth to only southward from the rock. Abuja falls within the Guinean-savanna vegetation zone of the West African sub-region with some patches of rain forest (www.abujagis.org.ng).

The city being on Gwagwa Plain characterizes its topographic relief and its tropical climate makes the weather mild as the daytime temperature averages 28 °C (82.4 °F) and a mean nighttime temperature around 30 °C (86.0 °F). There are two seasons; the dry season from November to March which also includes the Hamattan period that is occasioned by cold dry and dusty wind that lowers the temperature to as low as 12 °C (53.6 °F). The rainy season lasts from April to October with rainfall that ranges from 12-30 inches with monthly rainfall distribution intensifying during the months of July, August and September, which increases the water level at the dams that serve as the source of water supply to the city. However, during the hottest months, day-time temperature can go up to 40 °C (104 °F) resulting to high level of evaporation and hence reduced water levels in the dams (www.fcda.ng.org).
The city is located strategically at the intersection of two highways linking northern with southeastern and southwestern parts of Nigeria. The site of Abuja is clearly more central than that of the former capital Lagos (Figure 4.1) as Abuja is proposed to be an ethnically-neutral city that is accessible to all parts of the country. It now takes an average of about 400 miles to reach Abuja from different parts of the country, unlike Lagos where people from the northeastern part of Nigeria (e.g. Maiduguri) had to travel over 800 miles to go there (Umeh, 1993). Abuja is a new town that was established as a result of the decision by a military government. The next section highlights the historical development of the city.
4.2 Historical Development of Abuja

The decision to relocate Nigeria’s capital from Lagos (capital from 1914-1976) to Abuja was taken on 3rd February 1976 by the federal government after accepting a recommendation by Justice Aguda Panel that Lagos could no longer perform effectively the dual role of state as well as the federal capital. Reasons advanced by the panel is that Lagos is congested, dominated by one ethnic group, lacks land for expansion as well as its being the commercial capital of the country with largest industrial concentration, busiest international airport in the country and two major seaports serving as the country’s main import/export gateway (Salau, 1977). Obateru (2004) is of the opinion that the climatic and environmental conditions of Lagos also do not befit the status of a capital city; it has poor drainage as a result of being only 10 feet above sea-level and the climate is most of the time muggy and humid. He further argued that the location of Lagos on the Atlantic coast also disposes the city to easy attack and capture in the event of external military aggression.

Accordingly, a military Decree No. 6 of 1976 established the Federal Capital Territory (FCT) that was curved out of three states of Plateau, Niger and Kaduna at the central part of the country (Figure 4.1). Similarly, Federal Capital Development Authority (FCDA) was also established under the same military decree to plan and develop Abuja as Nigeria’s new capital and the entire FCT. The agency was vested with planning and development of the city including the provision of housing, infrastructure and basic services. As such, in June 1977, FCDA selected and commissioned an American planning firm; International Planning Associates (IPA) to design a master plan for Abuja, which was completed in 1979 and the development of the city started the following year. At the time the FCT was created there was an estimated population of 300,000 people from local tribes residing in 500 to 600 villages without road access and basic services. Those villages on the sites earmarked for capital city, the game reserve area, the reservoir watersheds and the airport were recommended to be relocated while the rest to be upgraded and integrated into the plans for satellite settlements (IPA, 1979, p. 22).

4.2.1 Administrative Structure

The Federal Capital Territory (FCT) is under a ministry that is headed by a minister who is appointed by the president. There are six local area councils (similar to counties) within the territory that are responsible for primary education community health and local markets. Abuja
city is geographically located within Abuja Municipal Council, but the local council controls only the satellite settlements while the city is administered directly by the ministry. The ministry has several departments and agencies (headed by directors) such as department of urban planning, Abuja Water Board, Abuja Environmental Protection Board for solid and liquid waste management, Abuja Geographic Information System for land management, etc.

4.2.2 The Abuja Master Plan of 1979

According to the term of references, the master plan process was to include a review of relevant data, the selection of a capital city site, the preparation of regional and city plans and accompanying design and development standard manuals. The philosophy of the development of Abuja hangs on seven important principles: equal access; equal citizenship; environmental conservation; city beautiful (or the garden city); functional city; effective regional development; and the rapid national economic growth. According to IPA (1979, p. 27), the goals of relocating the federal capital from Lagos to Abuja were:

- Availability of adequate land and natural resources that can provide a promising base for urban development, as the aspiration of the country for development and greatness;
- A new capital at a more central location where it can provide equal access to Nigeria's diverse ethnic and cultural groups; and
- A modern capital to serve as a symbol of national integration and unity.

The master plan document was submitted on 15th February, 1979 to FCDA and approved by the federal government. The plan conceived the new capital as a solely administrative city, with no effort to diversify its economy. Similarly, informal employment in small scale establishment: household services; traders, vendors, artisans, and part-time workers; were accounted for in the tertiary sectors of Abuja economy. These informal businesses are allowed in the city at designated markets and are estimated to account for 42% of total projected sources of employment (Benna Associates, 2009).

The plan projected a target population of 1,642,100 inhabitants made up of 278,400 households with average household size of between 5 and 6 persons at the end of Phase III by the year 2000 (IPA, 1979, p. 74). Then the city will then be allowed to grow to an ultimate population of up to 3.2 million to be accommodated in a total of 79 residential districts within the
urban growth boundary of 256 square kilometers at the completion of the fourth phase after which any additional population will be settled in the satellite settlements (IPA, 1979). The master plan divided the development of Abuja into four Phases described in Figure 4.3 below.

![Figure 4.3: The four phases of development of Abuja City (Source: www.abujagis.org.ng)](image)

(a) **Phase I**: This is the first part to be developed with all the required infrastructure and facilities. It was projected to accommodate 230,000 people in the residential districts of Maitama, Wuse1, Wuse2, Garki1, Garki2, Asokoro and Guzape. It contains the Central Area, which is a non residential district that consists of government zone (Three Arms) - the presidency, national assembly and the Supreme Court. The Central Area also includes the CBD, Federal Secretariat, and the cultural zone (National Library, National Archives, National Theatre, Eagle Square, International Conference Center, National Mosque and Ecumenical Center, etc). The Phase is also home to several foreign embassies, offices of international agencies and multinational corporations, etc. All the residential districts of this Phase are fully developed except the
district of Guzape, which is presently being developed. With the concentration of all these activities at the center, it is not surprising why some people call Phase I, “the city” while the remaining Phases are considered “suburbs” or “villages”.

(b) Phase II: This was designed to add fifteen residential districts to Phase I. It was proposed to accommodate a total of 585,000 people bringing the total population of the city to 815,000. Five of the proposed fifteen districts – Kado, Jabi, Utako, Wuye and Gudu/Apo are virtually fully developed and the rest are at different levels of development. Phase II radiates outward from phase I towards the western side of the city because the Aso rock restricts development on the eastern part.

(c) Phase III: This was proposed to add nineteen residential districts and it is envisaged to accommodate additional 785,000 people and thus bringing the total population of Abuja to 1.6 million. It is located at the suburb further away from the central area. The master plan envisaged the Phase to be fully developed by the year 2000. However, this dram could not be realized as only two districts of Gwarimpa I and Life Camp have been fully developed and Nabora and Lokogoma are currently being developed while the remaining districts are yet to be developed. However, in 2004 the FCT government allocated land to private realtors to develop residential estates in this Phase in order to ease housing shortage.

(d) Phase IV: When completed, this Phase was proposed to house additional 1.6 million people in twenty nine new districts at the sub-urban part of Abuja further outwards from Phase III. It was anticipated to bring the city to a total population of 3.2 million people. This Phase was not designed in the Master Plan; it was reserved for future expansion of development to be handled by local planners.

4.2.3 Review of the Abuja Master Plan

In 2004 Albert Speers & Partners was commissioned to review the Abuja Master Plan of the city after about three decades of its implementation with particularly emphasizes on identifying the factors that are constraining development according to the original plan and redesigning the central district. Ideally the plan should be reviewed at least every five or ten
years as far as best planning practice is concerned but this was not the case. A few of these distortions that the review was intended to also address include the proliferation of squatter settlements; inappropriate change of land use types and construction of buildings on sewer lines and the right of way of the proposed Abuja metro line (Benna Associates, 2009; Iro, 2007).

Accordingly, the services of four Nigerian urban planning consultancy firms were sought by FCDA to collaborate with Albert Speers & Partners for local content. Their tasks are to prepare studies as input to the Master Plan review process. The FCDA’s main concerns for the Master Plan revision are not on how to deal with the challenges of population growth, poverty, informality and provision of basic services. Evidence for this was presented by the firm handling the review exercise:

This work contained the review of the land use plans and the development controls; a concept for the vitalization of the central roads (boulevards concept); test layouts for relevant development zones (e.g. railway station, parks, the capital mall, central square, high rise zones); traffic and access concepts for the entire area’ (http://www.as-p.de/projects/all/4026.html)

4.2.4 Physical Development of Abuja

According to Abuja Master Plan, the federal capital city of Nigeria was designed as a viable urban environment for the seat of national government with full range of support activities (IPA, 1979, p. 71). Presently out of the total 79 proposed residential districts only eleven have been fully developed while several others are presently undergoing development (www.fcda.org.ng). The urban design of Abuja is based on the garden city concept of low density development and landscaping. This can be seen in the whopping land area (about one-third) allocated for open space and parks in the Master Plan: residential 33.2%, commercial and services 21.9%, open space 25%, roads 19.9% and 7% for parks (IPA, 1979). Figure 4.3 also shows the skyline of the city dotted with modern architecture, beautiful landscape, wide roads, and open spaces. Nigerians, especially politicians and elites are proud of the city that is titled “center of unity”. Personal observation testifies to Abuja being a modern city and as one local newspaper commented about the city:
Visitors from the Abuja airport into the Federal Capital City, encounter gently curving road, lined with acacia trees and electric streetlights, and see the impressive public image of the new capital city of Nigeria: clean, safe, orderly, and utterly modern. The contrast could not be starker in comparison to the former capital, Lagos (Daily Trust, 2007).

The overall land-use pattern conforms to a crescent-shaped urban form with Phases II, III and IV radiating outward from the center (Figure 4.2). This centrally-oriented city plan focuses on the area housing the federal government, the CBD and cultural center (IPA, 1979, p. 71), which all are in Phase I. The city structure results in the creation of hierarchies of development serving as the main framework for organizing the social and economic activities such that each of the four phases consist of sectors that each is further subdivided into four residential districts that surround the sector center. Sectors serve as the principal growth modules of the city and are envisioned as a mini-city that will contain a population of between 100,000 to 250,000. The sector centers were designed to serve as the focus of internal secondary employment. The master plan proposed the sectors to include a variety of non-residential land uses and activities such as commerce, governmental offices, institutions, recreational activities and parks.
The residential districts also serve as the basis for providing a hierarchy of commercial, community and utility services. The district service centers are intended to provide a nearly equal mix of modern and traditional market for informal service jobs and will include the following service facilities: intermediate and high schools, a library, retail areas, restaurants, a movie theater, a health clinic, and recreational areas. The district center is also planned to be surrounded by a large open space. The decisions to concentrate the community facilities into the centers, rather than to allow them develop into “strips" was chosen to minimize their impact on adjacent residential areas (Benna Associates, 2009).

The local residential neighborhoods in the city were not defined for a specific population or area of land. Rather, they are allowed to be planned by the local planners so that a range of housing alternatives are permitted within the framework provided by service and transportation systems and specified residential densities. In each neighborhood, residential units were proposed around a center with facilities such as kindergarten, a primary school, a shopping center, a health center, playgrounds, and park.

Construction work on the site of the new capital city began in 1980 with mass public housing embarked by the federal government in the Phase I of the city (Ukoha & Beamish, 1997) after several indigenous communities were compensated and relocated (Iro, 2007). With the completion of some housing projects, a few federal agencies started to move to Abuja and in December 1991, the federal government officially moved to the new capital. Since then the city has been experiencing population growth at an unprecedented rate as federal agencies, state liaison offices, international diplomatic missions, several firms and businesses have relocated to the city.

When Nigeria returned to democracy in 1999, there was renewed interest in the planning and development of the city after a long period of distorting the Master Plan and land use abuses by the previous military regimes (Iro, 2007). So, in 2003, Abuja Geographic Information System (AGIS) was established to completely computerize all the cadastral and land registry system of the FCT to replace the old manual system of land management and to restore all land uses to the original master plan provision.
4.3 Challenges to the Development of Abuja

4.3.1 Rapid Population Growth

It is imperative to start with a quote from interviews conducted by the author: “everyone wants to be in Abuja because it is the seat of the government” (Asokoro01). The Abuja Master Plan envisaged the population of the city to reach a total of 3.2 million people when all the four Phases of the city have been fully developed (IPA 1979). However, presently less than a quarter of the proposed residential districts have been developed, yet the population of Abuja was projected at over 3 million people with the highest population growth in Africa of 9.3% annually compared to Nigerian growth rate of 3.2% (Solomon, 2009). The rate of urban growth was also estimated at about 20% per annum in the satellite settlements (Benna Associates, 2009). Another estimate in 2007 by the director of Abuja Geographic Information System put the day-time population of Abuja at about 7 million (Iro, 2007). This explosive population growth the city is experiencing results from influx of people from various parts of the country due to real and perceived economic opportunities and a quest for “urban life” (Benna Associates, 2009).

Consequently, the rapid population growth has been exerting pressure on the existing housing stock and service infrastructures thereby overstretching their capacity because they are not increasing in tandem with population growth. This resulted to shortage of housing and frequent breakdown of service infrastructure; thereby leading to inadequate or poor quality services. Further, lack of expansion in infrastructure is already manifesting in traffic congestions problems. Inadequate opportunities for employment for the increasing population of the city are also leading to unemployment and underemployment, with consequence for quality of life in the city in the form of social apathy and crime. Coupled with the above problems, city management is finding it increasingly difficult to manage and control growth, with incessant violations of the original master plan very common (Benna Associates, 2009).

Also, due to high demand for housing, building permits are issued for houses in a few districts like Nbora, Gwarimpa and Lokogoma that are not yet serviced. The housing shortage also compels the government to allocate chunk of lands to a number of private realtors who developed mass housing in Phase III, which tenants accused of using low quality plumbing and sanitation materials that often breakdown. Complicating the situation further is unauthorized subdivision of houses into smaller apartments after government has sold its houses to its
employees; further stretching the capacity of the existing facilities because refuse and sewer coming out of these houses and the demand for water would increase above official estimates as depicted by a planner working in FCDA:

*I'm a planner so I know certain things. I know Garki is overpopulated for sure because after the sale of government houses, many of the flats that were meant to be one 3-bedroom flat have been converted into 3 or 4 flats. The people that bought them up subdivided. So the density of population has increased and that means generally human waste will increase by that proportion too (FCDA Planner)*

### 4.3.2 Shortage of Housing

Although the Master plan prioritizes affordable housing, it is grossly inadequate in Abuja; caused by the rushed movement of workers from Lagos to Abuja in the 1980s without adequate provision for accommodation. Ikejiafor (1998) argued that because low and middle-income people are unable to build, buy or rent affordable housing, they squat on undeveloped land at the periphery or share a dwelling unit with other families. Although the government built 22,000 housing units in 1980 intended for low income workers (Ukoha & Beamish, 1997), these housing projects are now occupied by higher level civil servants. It appears that efforts to be modern, with higher building standards and foreign building materials, inflate the cost of housing and discourage local building materials and technology. Buying or renting a home in the private sector is very expensive in Abuja plus mortgage financing is very limited.

Similarly, access to land is very centralized, difficult and expensive to obtain in Abuja. For one to own a parcel of land to build a house, she has to obtain an application form from Abuja Geographic Information System (AGIS) and pay an application fee of 100,000 Naira ($650) to open a file. Because land allocation is supposedly based on applicant’s state of origin, an applicant could be on the waiting list for several years and if the land is eventually allocated, then land premium per square meter must be paid (e.g. in Phase I, the fee is 15,000-18,000 Naira [$100-150]) before a certificate of occupancy is issued. This is beside the bureaucratic hurdles of getting a building permit and high cost of construction³.

³ For more information about the procedure of land allocation and land premium in Abuja visit the AGIS website at: [http://www.agis.fct.gov.ng/land_premium.html](http://www.agis.fct.gov.ng/land_premium.html)
4.3.3 Informal Trading and Squatter Settlements

Squatter settlements and slums have proliferated in several parts of the city especially in the suburban areas even though the master plan called for western standards of development and housing. These settlements are unplanned, overcrowded and lack basic amenities and infrastructure. According to Jibrin (2006) there were 24 squatter settlements and informal markets on un-serviced land that covers 2,193 hectares within the city boundary. However, it is worthy of notice that this figure is low compared to other cities of developing countries where squatter settlements house up to 70% of the city populations (Cohen, 2006). Few of these settlements like Utako and Maitama villages are actually pre-existing villages that have not been resettled yet. Myers (2011) suggested the disorganized treatment of pre-existing settlements in the FCT has created an uneven mixture of housing types, even while officials claim that it is impossible for slums to develop in the city.

Despite the difficulty in accessing affordable housing, the policy in Abuja has focused on eradication rather than integration and upgrading the squatter settlements, thus disrupting the livelihood of people in the informal sector. For instance, over 800,000 people were left homeless in the city and its environs through squatter settlements demolition (Jibril, 2006; SERAC, 2006). Water vending and roadside trading are also banned by Abuja Environmental Protection Agency, and when some young people and adults were caught violating the law, they were sentenced to whipping, imprisonment or a fine (Daily Trust Newspaper, 2010).

4.3.4 Segregation and Social Exclusion

Contrary to the dream of a city that would provide equal access to Nigeria’s diverse population (IPA, 1979) the majority of Abuja residents are elites and wealthy people, while the poor live in the squatter areas or at the periphery in satellite settlements (Benna Associates, 2009; Adama, 2005). Personal observation and interviews found spatial differentiation of districts in Abuja because the Abuja Master Plan designation of a priority central area close to the seat of the federal government has inevitably created a situation where neighborhoods on the periphery are neglected thus leading to poorer facilities and services in these areas.
The poor have been systematically excluded from the city because housing is too expensive to them. While the wealthier and political elites live in Maitama, Asokoro and Wuse II districts of the first phase, the middle income and senior government employees reside in Garki and Wuse I districts in Phase I and other districts of phases II and III and the poor live in satellite settlements that that are not different from slums. Edu (2006) and Ilesanmi (2006) opined that these sub-urban settlements do not receive similar development treatment as the city center because unlike the latter, roads are unpaved and piped water and basic infrastructure and social amenities are absent in most of these areas.

4.4 Provisions of Public Services and their Challenges in Abuja

4.4.1 Provision of Basic Public Services

According to the Abuja Master Plan: “next to housing and the availability of employment opportunities, the most important element of a city is the quality and access of a wide variety of public services” (IPA, 1979, p. 117) based on the new town model that assumed egalitarian distribution of urban services to all class of people by the state. Servicing the city with these basic services is being done in phases as stipulated by the master plan and as such some neighborhoods in Durumi, Gwarimpa and Nbora in Phase III and Kado and Utako districts in Phase II are yet to be provided with tap water and central sewer system even though they have been fully inhabited. Households living in these areas have to rely on alternative sources of water and septic system pending when they are connected with the city utility services. There are two agencies responsible for the provisions of the studied urban services, as highlighted below:

(a) Piped Water: Tap water is provided by Abuja Water Board, which it is trying to keep up with increasing demand. The raw water is obtained from Usman Dam after which it is treated and then pumped into six overhead tanks from where it flows through gravity to various homes (Ilesanmi, 2006). While several homes are not metered because Water Board does not have sufficient meters and residences are charged flat rate of 4,000 Naira⁴ ($26). Two types of meters

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⁴ One AEPB official described the flat rate as “unfair” because it is based on the estimated number of rooms or people in the house but not on consumption.
have been introduced in some areas: the conventional water meters; and the pre-paid water, which will only supply the amount of water the consumer has already paid. The following quote illustrates one of the major challenges of piped water provision in the city.

Servicing of the city with water supply is done in piecemeal. They cannot supply everywhere at the same time … In some areas in the FCC there are some places that they don’t know anything about the main water supply. They have to rely on those local [water] sellers (Water board staff)

One resident of Phase II described Gwarimpa Housing in phase III as “one of the largest housing estates in Africa but people do not find joy in staying there because of water problem” (Jabi03). Another issue with phasing of infrastructure is that the delivery of water and sewage being networked services is often disrupted as a result of road construction in new districts causing temporary water outage and sewage spillage respectively. Even for the districts that are connected, water supply is often erratic (Benna Associates, 2009). For example, this study found that some households have to rely on tubewells or purchasing water from vendors or fetching from neighbors, streams and rain as piped water supply is unreliable in some parts of the city. The details of problems with water supply are covered in the next section.

(b) Refuse Collection: Solid waste management in Abuja involves refuse storage at household or block levels using the green bins sold by AEPB5 while collecting and transporting refuse have been contracted out to some private companies through a public-private partnership. The partnership is such that the utility agency charges residents collection fees at subsidized rate and then pay the contractors at annual basis while the contractors are assigned to various districts to collect refuse from homes at stipulated times per week and transport same to dump sites in the outskirt of the city. But a study by Imam et al (2008) found that there were insufficient facilities for solid waste disposal in the city because the amount of waste generated has increased in both quantity and diversity without adequate investment in treatment and disposal facilities. As such households devise alternative means of dealing with the situation (see chapter five).

5 While a respondent reported that AEPB sells the bin at the cost of 25,000 Naira ($160) (Wuse03), another said that it costs less than $75 in the market (Gaduwa01).
(C) Sanitation Services: The AEPB also owns the centralized sewer system which is struggling to extend to various neighborhoods in Phases II and III that yet to be connected to the network. The wastewater is transported through the network by gravity to some waste water treatment facilities where the wastewater is supposed to be treated. The treatment plants are located at Gudu, Utako and Wuye districts and there is another one at Wupa that is under construction. Ilesanmi (2006) was of the opinion that FCT authorities placed low priority on dealing with wastewater issues because some of the treatment plants are non-functioning or are operating at low capacity. Households in those parts of the city that are on the sewer system rely on septic system, discussed in the next chapter, as a coping strategy. The following quote illustrates the situation:

> It is not every part of the FCT that gets connected to the centralized sewer system. To be specific the suburb districts within the FCT, the area councils, the satellite towns, the squatter settlements they do not have access to the system (Lifecamp06).

4.4.2 Maintaining the Service Infrastructure

The theme that emerged from the study is that regular maintenance of the existing service infrastructure is almost absent leading to frequent breakdown of water and sanitation facilities. An interviewee who is also an employee of the city pointed out that “most of pipe burst are the result of tear and wear”. This opinion is also reinforced by several households. For example, a resident of Phase I mentioned that: “where I live the houses have been built over 30 years ago and the same pipes are still there in the ground” (Garki03). Further the pipes were made of steel that easily get rusty and bust thereby affecting water quality and pressure, cutting off the supply or causing sewage spillage on the ground or mixing of sewer with tap water as exemplified by a lady in Wuse:

> Most of the pipes are rusted and I learned that both the water and sewer lines were laid at the same place and the sewer line was above the water line that is what they [utility workers] explained. So when the pipes got rusted the water started mixing together. We were even drinking it like that without knowing. Until it became so much (Wuse02).
According to one AEPB staff, one reason for poor maintenance is lack of parts and equipments caused by underfunding during budgetary allocation. Another issue is that when problems occur with the water/sewer network on a weekend, households have to wait till Monday or find alternative ways of addressing them. Sometime the problems were caused by the residents themselves by illegally connecting their houses to water distribution pipes. Others mishandle the infrastructure or refuse to report problems even if they are located close to their houses; evidence corroborated by personal observation, communication with agency officials and secondary data. For example, a respondent recounted that “somebody was digging and punctured the pipe so water was leaking and so the supply was reduced” (Lifecamp06). In another incident a household planted a big tree that its roots started obstructing a sewer line. Another problem is that complaints by residents were often not responded to by the utility agencies or there used to be delay in fixing the problems. However, because this topic involves reporting problems to the utility agencies, it is treated separately under coping strategies in chapter five.

4.4.3 Metering and Billing Systems

In Abuja, refuse collection and sewer charges come in a single bill because they are provided by the same agency while that of water is separate. An issue with the system is that a number of households, more especially those living in apartments, share water meter, refuse bins or are connected via a single sewer and or water pipe and hence they are lumped together in one utility billing. This often creates a problem of who should pay what amount or who is responsible for repairs, which often results in water disconnection or delay in collectively fixing a problem when some of the residents defaulted in paying their share as one resident noted:

Like in my compound, we have about 18 flats and we have one meter. So everybody contributes and that is what we use to pay the bill. What we do is actually we divided equally to the number of flats and we don’t have [separate] meter to say this is what you consume (Wuse07).

Similarly, the annual refuse collection and sewer bills have been described as “crazy” and “outrageous” in consideration of the average income of Abuja residents. Further, recent review of tariff was considered sudden and without user consultation. The billing system itself
appears problematic because of inconsistency in billing, as one resident of Jabi District in Phase II reported receiving a water bill for 5,000 Naira ($32) in one month but the following month the bill went up to 20,000 Naira ($125). Another resident of a residential estate narrated their plight when their building was mistakenly classified as industrial by water board and were charged at a very high rate and when they objected by not paying, their supply was disconnected. An interviewee from Phase II also remarked on the billing: *They decide on how much they want to charge. It is a monopolistic product; we don't have option than to patronize their water supply. So you don't have option but to pay whatever they bring to you (Utako06).*

The payment process is such that households are required to pay their bills at some designated banks and then present the receipts as evidence of payment to a task force that goes around to disconnect water supply to any household that has no evidence of payments. However, the process was described as, “cumbersome” in that it requires leaving places of work to queue up and “struggle” to pay the bills and sometimes when users make the payments, “for the next 3 to 4 month”, as one resident mentioned, the payment will not reflect into the agency account so it will be assumed that the bill has not been paid. The consequence of that is: “when you are not lucky to be around the house when they [water board officials] come to show the evidence of payments they can just cut off the water and go” (Wuse07). A household from phase III alleged that some of the officials are not sincere because several households would pay and others would not and they would give the latter leverage of not disconnecting their supply (Gwarimpa02).

The frequency of billing for the services is also of concern because according to one respondent: “you know in Nigeria, people they don’t want to do their duties, they don’t want to come every month to collect the correct [meter] reading” (Jabi02). Though, AEPB is supposed to bring bills for sewage and garbage once every year, but a female resident of Garki District contended that they will not bring the bills until after two or three years and she added that:

*They know we are civil servants, they are supposed to bring it monthly, so that as we receive our salaries, we go and pay. But they will bring the bill of millions. Where would you get such money to go and pay? So we just threw away the bills and forget about them. There was a time they came with mobile courts. They couldn't get anybody to arrest. We knew they were coming so we ran away and locked our doors (Garki03).*
A senior official of AEPB admitted that they are yet to figure how to make the billing system efficient in terms of cost recovery and he added that: “the biggest problem we have is the billing system; the collection system and the revenue that was to be accrued from it” (AEPB official). Another interviewee commented on the billing system that:

When they first brought the vehicles to collect the refuse, everyone was happy. Then the slammed each household with [annual] bills ranging from 300,000 to 800,000 Naira ($1,875-$5,000) in a civil servants dominated area. Of course we threw the bills in the trash bin. .. If you put in refuse collection bill that is within the range of what people pay for other utilities, people would pay. But the bill they brought is one’s annual rent times two. So people just ignore them and kept on living their lives (male, Garki District).

The residents themselves seem to share a portion of the blames because some do not pay their bills as it was the practice before the partnership. A resident admitted that: “most people including yours sincerely do not pay their bills” (Gwarimpa03). Similarly, a respondent narrated cases of renters who have unpaid bills and when water supply is disconnected in their homes they move out of the house, leaving the debt on the house owner or if it is a government-owned house, the person who purchased the house and moved in could not get the water reconnected until the bills have been “settled”, because the utility agency, “does not care, the bill is in the name of the house not its occupant” (Garki02).

4.4.4 Solid and Liquid Waste Disposal

This study found that there are several issues with disposing solid and liquid waste in the city. There is concern about sewage treatment and disposal as the two treatment plants built for the first phase remains the only facilities serving the whole city (Ilesanmi, 2006). The capacity of these plants to adequately serve the whole city is questionable as some interviewees alleged and Ilesanmi (2006) corroborated that most of the sewage gets poured into the near-by water bodies as exemplified by this quote:

They cannot handle the load so they certainly empty it into small streams nearby. And we don’t know where the streams go to. You can never tell who is getting into these streams. Somebody may play or wash and animals living in their habitat. I’m not impressed with that way the sewage in the city is disposed (Garki02).
Garbage collection is irregular in several areas in Abuja (details in the next section). This supports Cohen’s (2006) assertion that in the cities of developing countries waste collection often does not exist in some areas. This is despite the fact that several cities spend between 30-50% of their operational budgets on waste management (Bernstein, 1993). On refuse disposal process, an urban planner admitted that even though he works for the FCDA, he is unaware of any constructed landfills in Abuja but only dump sites. The following quote by an official of AEPB depicts the problem with solid waste disposal in the city:

*I work with the engineering department of AEPB. There are several problems with the refuse collection in the FCC…But as of this time, we don’t have a good disposal point for the waste. We only have some dump sites, which are not standard engineered landfills. We don’t have a standard landfill in Abuja yet. But from what I understand it is underway; we are supposed to provide a large management facility where the refuse would be taken to be sorted out and disposed properly* (AEPB Staff)

### 4.5 Problems with the Delivery of Public Services in Abuja

#### 4.5.1 Problems with Tap Water Supply

As pointed out in the beginning of this section not all the inhabited districts of Abuja have been connected with city water. For those connected, this study found that the problems with the supply include water outage and low quality and pressure as described in details below.

**(a) Water Outage /Shortage:** Water supply has been described as “epileptic” because outage happens for hours or several days causing “chronic water shortage” (Wuse01). Causes of outages include fault with machineries, or “engineering work” on the dam supplying water to the city or as a result of “washing of tanks”. Water outage is usually announced on the media but sometime it is unexpected as a result of broken pipes, rationing or households “do not have an idea” of its causes. The shortage affects only some parts of the city because residents revealed that if there is no water in one district they usually go to another to fetch water. According to one interviewee: “sometime back we had a problem with water shortage; there were no running tap and it lasted for almost a week” (Utako04) and another said: “though we have been connected there are days that we spend without water” (Gwarimpa04).
A water board official admitted that the capacity of the dam itself is inadequate to provide water to the entire city because the number of people using it is more than the estimated figure, so “in the process of rationing some areas will get water and others will not” (FCDA staff). The following quote from a respondent from Utako described his experience with water rationing:

*Mostly between the month of April and early June, we used to experience acute water scarcity and authorities of Abuja Water Board they used to explain in radios, and television and newspapers that due to low water level in the dam we are going to face water scarcity, which usually does not last longer than a month in between that period (Utako06).*

**(b) Water Quality:** While twenty four households admitted drinking the piped water, some indicted that there are times when the water quality is unsatisfactory and they have to boil it. A resident of Phase III never “*contemplate drinking it*” (Garimpa03) and another cannot “*guarantee*” the quality of the water (Lifecamp06). Another household also opined that sometimes “*the water is very dirty; you cannot fetch it from the tap and drink*” (Wuse02). One respondent from Garki in Phase I also commented about the water quality as follows:

*Many times the color is not okay; clean water should actually be colorless and odorless but sometimes if you turn on the tap take you cannot even bath with it because the color of the water is milky brown so we just use it for strictly washing plates; we do not consume that one (Garki02).*

Based on the themes that emerge across all the interviews, this problem is occasional that mostly result from prolong outage and it does not usually last long. It also happened as a result pipe burst that caused water to mix with dirt. As such some household indicted that they filter the water before usage because, for example they, “*don't want to contact typhoid*” (Wuse06). A resident of Life Camp provided the following comparison about his present and prior experiences with water quality:

*When we first came here we used to boast that the water that we drink from the tap is better than the Swan [bottled] water. But right now things have changed; like introduction of color and smell. Definitely something is wrong somewhere;*
may be because of sewer leaking or manhole somewhere. But definitely there is a problem with the water quality (LifeCamp03).

(c) Water Pressure: Given that water flows with gravity, it does not often reach houses on hilly grounds like those in Maitama or apartments on high-rise and as such households often use booster machines to “push water” to the upper floors or into overhead tanks. When the pressure is low some areas only get water when the usage is minimal; when most people are at work or at late night hours when people are sleeping. According to a resident of phase III: “the pressure will be low to the extent that you cannot fill a bucket within one hour” (Lifecamp01). Low water pressure also affects sanitation system when water could not be used to shower or flush toilets. A respondent from Garki living in a high-rise narrated the following experience:

I live in a high-rise and the pressure of the water couldn’t go up. So you find a situation where by you have water downstairs but the first and second floors have no water and you have to wait till night and collect water in containers (female, Garki Area I)

4.5.2 Problems with Solid Waste Management

As mentioned earlier, municipal solid waste management in Abuja is through a partnership between some private companies that collect garbage from residences to disposal sites and the AEPB that disposes the garbage through landfills. The major problems identified with the system are the pick-up frequency, shortage of bins and some issues with the companies. The details are as follows.

(a) Pick-up Frequency: Despite the partnership, there is evidence of irregular garbage pickup, which is more pronounced in Phases II and III as personal observation (Figures 6.1 and 6.2) and interviews have shown. For instance, a resident of Phase II narrated that sometimes garbage pile for several days or even weeks before the trucks come and pick it (Utako04). This delay often made the environment to look “very filthy and dirty”, because refuse littered everywhere, even on the road and the “smell, flies and sometime even maggots would disturb the neighbors and an outbreak of cholera and other diseases may happen” (Jabi04) or “you would see all these dogs and hens they start piercing through it” (Gwarimpa02).
(b) Shortage of Bins: Households are required to purchase green refuse bins (see Figure 4.4a) only from AEPB. But the bin has been described as expensive and as such many people could not buy and the agency is the only one entitled to sell the containers even though a similar bin is quite cheap at the market. The following quote explains this situation well:

Abuja environmental board provided refuse bucket and we pay 25,000 Naira [$160] to get that bucket from them and give polythene bag that you can leave your extra refuse beside the bucket. So when you pay they will give it to you and then stamp it. So you keep it in front of your building…. if they come to your compound and you don’t have that bucket, or the polythene bag, they will not collect anything from there (Wuse03).

Also, AEPB provided big bins (see Figure 4.4b) to a group of houses at a central point in several residential blocks or estates which often creates disharmony among residents on the manner at which they use them. Another disadvantage of using single bin is that carrying refuse from homes to the central collection point is tedious. Interviews and personal observation also suggested that the quantity of refuse generated by households is more than the capacity of the bins and a number of household also share bins because they are inadequate as observed by one respondent:
They have introduced these green collection bins and they have assigned them to houses. Some have been damaged or taken away by the hoodlums. So you see to block of about 16 flats, then you now see only 4 bins outside. These are actually inadequate, so most of the time when you come to such areas you would see refuse on the ground, because their bins are already full. So it means if the collection plan is once a week, it means the place will be very filthy and stench and so on and so forth. So I think this is a huge problem. The scenery is also terrible, sometimes refuse spill onto the road; even blocking traffic (Garki02).

(c) Issues with Garbage Collection Companies: There are a few issues with the companies that also emanated from the interviews. First, the garbage collectors are selective on the type of refuse they pick as they leave behind certain substances like leaves/grasses and furniture. Also, there was concern that the environment is littered when transporting the refuse as some of the trucks are not covered (see Figure 5.3). Several households moreover indicated that a number of the companies don’t have adequate vehicles to evacuate the solid waste effectively or that their trucks frequently breakdown. Another problem that seems to be affecting refuse collection in Abuja is the way a few of the companies operate as commented by a respondent:

Sometimes they do not have vehicles; when it is time for them to come and collect the refuse; they will just hire tippers and laborers, and then after the collection for that day they will dispose of these people ... Then if they are given this same contract, there will hire another set of people. So the problem is that any time the contractor gets a job like that, since he does not have permanent staff and trucks of his own, you would discover that the people he hired would not do the work effectively. They will do it anyhow because they are not trained in doing that job (Wuse06).
The partnership appears to have its own challenges. Two interviewees narrated an incidence where the companies went on strike and refused to collect garbage because they have not been paid by the AEPB. Similarly, when there is a problem with refuse collection households are often left without clear idea of whom to contact; the companies or the utility agency, as a respondent noted:

*The problem is that the residents have no direct contact with the contractors. The contractors have been employed by the Abuja Environmental Protection Board. That residence paid for the garbage containers and they also pay for the garbage collection to the AEPB (Jabi04)*
(d) Other Problems: Additional problem identified with solid waste management in Abuja is illegal dumping of refuse along road sides, inside drainage channels or on empty lots and/or uncompleted buildings. Also, a few interviewees reported some motorists throwing things from their cars thereby littering the streets. The attitudes of people in managing garbage is also problematic that one respondent from Phase I remarked that, “most a times you see some refuse on the floor rather than inside the bin” (Garki07). Another respondent from phase III mentioned that dumping refuse on passage way nearly caused fight between families in his neighborhood if not by the intervention of his family to “quell the situation” (Gwarimpa02).

Another problem is that different types of waste including hazardous substances are dumped together at collection points and dumping sites regardless of their incompatibility. There are also problems that are consequences of not collecting refuse on time. For example, there was concern that dirty environment harbors flies and mosquitoes that can be dangerous to health. Another issue also brought up by respondent is that the AEPB used to fumigate the environment in the early years of establishing Abuja but the agency later stopped and consequently rodents like scorpions and rats found shelter around garbage.

4.5.3 Problems with Sanitation System

The sewer network has not yet reached several parts of Phase III (e.g. Gwarimpa, Lokogoma and Nbora) and some districts in Phase II (e.g. Mabushi, Wuye, Utako). As such, the residents living in these areas are left with the burden of building and maintaining underground septic systems. For those connected to the central sewer system, problems such as sewer blockage and overflowing manholes were found to be associated with the system. Other sanitation problem in the city is lack of public restrooms as highlighted in the next sub-sections.

(a) Sewer Blockage and Sewage Overflow: Evidences from interviews and observation (Figure 4.7) revealed that there were frequent problems of blocked sewer lines, missing manhole cover, overflowing manholes and “bleeding” of sewage on the ground and on the street as one resident of phase I observed in his neighborhood:

The underground central sewers system got blocked or filled up and for one reason or the other it actually will start spilling onto the roadways and then by
gravity it flows and some time gather in front of some certain people’s houses. And all the flies in Garki are sitting down there and you cannot even breathe. So I have seen quite a few and many times you see people crossing the road and cars splash it over them when one is walking along the walkway (male, Garki 02)

Similarly toilet blockage and sewage overflow also occurs within homes causing what some households described as “terrible smell” or “embarrassing” situation and if it happens during rainy season the sewage often mix with storm water which drains into local streams and rivers or at times the sewage often flows back into toilets as one interviewee experienced:

*I know someone that lives in a place in Gwarimpa where if it rains the sewage from the manhole came back through the toilet into the house. It is like the reversal of the normal flow. It is really uncomfortable; you cannot stay in the house when it rains (Garki02)*

Figure 4.7: Overflowing manhole in Wuse2, Phase I (Source: fieldwork)

The attitudes of households on how they use their restrooms also appear to contribute to problems such as sewer blockage/damage and bleeding manholes. Flushing of solid objects like female sanitary pads, polythene/ plastic bags, and solid waste were among the causes of the problems identified by respondents and other studies (e.g. Ilesanmi, 2006).
(b) Lack of Public Restrooms: There was also concern about people defecating on empty plots and uncompleted buildings within the city even during the day, especially in districts that have not been fully developed. This problem is attributed to failure of AEPB to provide public restrooms and lack of enforcing environmental laws against defecation in open spaces as one respondent lamented below:

_Some people even drive their cars and walk into places like Utako in a modern city like Abuja and just beside walk ways and defecate, even close to police station where they are supposed to stop those things (Utako02)_

These findings support the recent WHO/UNICEP report that 26-50% of Nigerian population, but mostly in rural areas, defecate on open land (WHO, 2012, p. 20). In summary, despite the vision of egalitarian provision of urban services in the master plan of Abuja, provision of piped water, refuse collection and sanitation services is fraught with problems. As such, the next chapter presents the strategies households utilized to cope with the problems.
CHAPTER FIVE
COPING STRATEGIES AND THEIR EFFICACY

5.0 Chapter Overview

Chapters five and six present the findings of this study. In this chapter, research results about first and second questions are presented. First, the chapter presents households coping strategies with unsatisfactory urban services and second, the efficacy of the strategies as coping mechanism. For both questions, their research propositions are restated, followed by the findings.

Propositions for Questions One and Two:

“Households in Abuja city respond to the problems with provision of urban services using several coping strategies including Exit, Voice, Loyalty and Neglect”.

“Some strategies are more effective than others as alternative coping strategies (quasi-exit) or as means of improving the performance of existing public service (voice)”

This proposition has been supported by the study as all the sixty respondents mentioned utilizing one or more of the coping strategies. Quasi-exit was the most dominant as all the 60 respondents have utilized at least one option, followed by provider-exit employed by 37 and 6 respondents for maintenance services and refuse collection respectively while Tiebout-exit has very little support. Complaints to utility agencies by residents’ associations were highly effective in getting service-related problems solved but was less effective by groups of neighbors, while individual households often receive little or no responses from the agencies. Loyalty to the utility agencies was mainly a result of improvement on service delivery or by comparing service performance with other cities. Refuse collection problems were neglected by 38 households, but problems with water and sanitation services were neglected by 19 and 13 respondents respectively, primarily for temporary problems or those located away from homes. Details of the findings are presented next.
5.1 Exit Strategies

This study found that exit strategies in Abuja fall into those three kinds that have been reported in the literature. The first was the dominant strategy used by all the 60 respondents involves creating temporary alternative services through the informal sector (quasi-exit). The second is much less frequent entails permanently switching from one service provider to another (provider-exit) and involved 37 residents who changed their provider of maintenance services from the utility agencies to commercial artisans and six gated communities changed their refuse collection companies. The least utilized strategy is residential relocation (Tiebout-exit) as none of the respondents relocated due to refuse collection problems but 12 renters expressed their intention to relocate if water and sanitation problems persist.

The main determinant of quasi-exit appears to be the unreliability of necessary public services, which are provided through monopoly. Residents opted for the private repair of service facilities because it was more effective than depending on the utility agencies in terms of time and cost savings and quality. Renters appear to be more inclined to use Tiebout-exit as they don’t have tangible investment in their neighborhood. This section explains the findings on these strategies further.

5.1.1 Tiebout-Exit Strategies

As expected, the study found very little evidence of households moving from one district to another because of poor urban services as none of the 28 respondents who are homeowners reported ever doing so. However, one renter has relocated due to water shortage and five others expressed their intention of moving if water/sanitation problems persisted. This shows that in this study Tiebout-exit actually depends largely on the tenancy of household and the necessity of the services involved. Since the strategy was not intended to improve the situation, it has no efficacy level as presented below for each of the services.

(a) Tiebout-Exit for Water: While only one renter changed residence due to water shortage, there was no evidence of relocation or intention to move due to water problems for homeowners. For instance, a lady from Phase I indicated that she has never and would not consider leaving her house because of water supply problems; rather she would “fight to tackle the problem”. Another respondent narrated that: “I never had the cause to do that [move]
because there was no need. People that live in their own residences they don't have to move because of problems with water” (Garki08). Other comments include: “no, not at all” (Nbora01), “not an option at all” (Garki04) and “it does not even arise” (Asokoro04). Interviewees also indicated not knowing other people who moved to other districts due to water problems. For example, an interviewee from Phase II said that: “I have never heard any case like that” (Utako01) and another opined that: “I don't think people would leave the area because of water problem; there might be other reasons but not water” (Wuse04).

A tenant from Jabi in Phase II revealed that he was previously living in phase III and it was specifically because of water shortage that made him relocate (Jabi03). Another respondent also knows a family that moved from Gwarimpa in Phase III to the central city not only due to lack of water but also proximity to work place. One more renter from phase II pointed that if she is to face, “constant water shortage”, she would automatically move from her current residence to another place where there is continuous water supply (Utako03). Even within Phase I where services are relatively better than other areas, one renter from Asokoro expressed his likelihood of relocating because of water problems thus: “yes several times I have considered moving because in areas like Garki and Wuse I and Maitama districts, they have steady water supply” (Asokoro03). Others would consider Tiebout-exit to “a better place where there is constant water” (Utako03) or “if the problem persists” (Garki05).

(b) Tiebout-Exit for Refuse: There was also no evidence of moving because of refuse collecting problems for both the renters and homeowners. Responses to whether households have relocated due to refuse collection problems were overwhelmingly in the negative with worlds like “never” or, “would not move”. For example, a respondent from Phase II did not “consider moving because of garbage” but would rather “devise a means” of dealing with the situation (Utako06). An interviewee from Phase I also maintained that garbage problems have not reached the extent of relocation or as another household commented: “I don't know a situation where by people leave their residence because of accumulation of refuse” (Wuse04). A few residents also indicated that they were more concerned with water and electricity than garbage collection, thus implying that refuse collection is at the lower hierarchy of critical services.
(c) Tiebout-Exit for Sanitation: Responses were divided between renters and homeowners for this strategy as in the case of water. When asked if households have changed residence or intended doing so because of sanitation problems, all the homeowners have never moved or knew somebody who did. A household from Phase III for instance answered that: “not to my knowledge” (Gwarimpa03) and another from Phase I would not contemplate moving out of his home due to sanitation problems (Wuse03). Other responses also included: “no way”, or “I will not leave”. The following quote demonstrates a typical response of a homeowner:

Just because of sewer that I will move to another location? There is nothing like that. It is not enough problems for me to run away from my home. When something happens I can always solve it (Garki04).

On the other hand, seven renters indicated intention to move when sanitation problems are severe. For example, a tenant of Phase I opined that: “yes I would [move], because one has to live in a health environment. If it is not healthy; it is not worth living there” (Asokoro02). According to another respondent from phase III, the worst thing that can happen to him is a blocked toilet that can’t be flushed and there is no immediate solution to it. He mentioned that in that case he had to leave the place for another district (Gwarimpa05). Other reasons for intention to relocate are if the problems are “huge” or “too serious” or because of the health hazards involved in sewage overflow. One respondent in Phase I would definitely move if the problem persists and: “there are no two ways about it” (Wuse05). The following quotation also emphasizes the possibility of Tiebout-exit by a renter:

Yes, really I would think of moving to another district because after working for so many hours and on coming home to relax and you find the place is smelling and with a potential disease outbreak (Garki01).

5.1.2 Provider-Exit Strategies

This means that in a competitive environment, disgruntled customers can exit one service provider to another. Though in a monopoly of water supply and sewer system in Abuja, households don’t have the opportunities for using this type of exit; it is possible to change service providers in the case of (a) refuse collection and (b) repair works on water and sewer
facilities. This study found that six gated communities have changed one private refuse collection company for another due to inefficiency in refuse collection (refusing to come and pick garbage or littering) as the AEPB do not enforce the terms of partnership agreement on the companies. Similarly, 37 respondents switched from obtaining the services of the public utility agencies in repair works to private sector. This was informed mainly by the desire to save time and often cost and to have quality job. The details of these two provider-exits are as follows.

(a) Changing Private Refuse Collection Company: Outside the partnership between AEPB and private companies for refuse collection, this study did not find evidence of any other formal refuse collection. However, six gated communities contracted out refuse collection directly to other private companies through their residents’ associations without going through the partnership because they were not satisfied with the performance of the first company. An interviewee from Jabi in Phase II also indicated the desire of his neighborhood to change the company assigned to their neighborhood:

We have found out that there are several companies that are involved in refuse collection. So since this [current] one is not very effective. So we are considering opting for those new companies to see whether they would work out well for us. So, we will try to find out from them and ask them questions and if they can provide answers that suit our questions, then we would switch to them (Jabi04).

Effectiveness: The approach has been evaluated to be moderately effective because it satisfied two of the our three evaluation criteria: its success in solving the problem as residents insisted on getting value for their money and has no health threat because the same licensed contractors are used. According to a resident of phase II, there was an instance when residents of his neighborhood hired a different company that was not assigned to their area to dispose their garbage, “we found them and explained to them that the [assigned company] have not come, so we [paid] sort it out with them based on understanding” (Utako03). Nevertheless, this strategy is costly (afforded by few families) as households have to pay more without the subsidy that AEPB provided in the partnership.

(b) Informal Maintenance Services: According to a regulation set by the FCT administration, any problems located on the public sewer and water lines on the streets must not
be handled by households on their own but only by the agencies. However, problems within homes can be handled by the agencies or by alternative service providers. Accordingly, this study found that 37 respondents have changed their approach from using the services of public utility agencies to hiring informal artisans for repairs on water pipes, sewer network, and septic systems. Personal observation revealed that adverts on billboards and walls with cell phone numbers for plumbing services and other repairs are common in Abuja. Surprisingly a few of these artisans are actually employees of water board and AEPB working part-time outside their official duties and they can be found in front of the utility offices or at some places like Utako Village as pointed out:

They stay close to the environmental protection office; you get them there. I wouldn’t know whether they are licensed by they are normal plumbing constructors that can do those kinds of things. They would just approach you and they will tell you if you have any problem they will fix it for you. .. It is mainly informal contract, what happens is; they see the extent of the work and you negotiate and they fix the problem, and you pay them (Garki 08).

(i) Private Water Plumbers: They fix pipe-related problems and they are often visible standing on road sides with their tools waiting for potential customers. Several households pointed out that they prefer to hire them than to report water supply problems to the agency because it saves time, it is cheaper and they can use quality materials, unlike the utility agency officials that are accused of purchasing cheaper low-quality parts and would do the repair at the time they want. For example, a lady in Phase I also narrated that a plumber “solved” her water shortage problem by digging the whole pipes and reconnected her to another line (Wuse02).

(ii) Private Sanitation Workers: They can be categorized into two. The first refers to registered private companies that evacuate liquid waste from septic tanks using specialized vehicles. The second category is the informal workers that repair such problems as broken/blockage sewer pipes or damaged septic tanks. These informal workers are plumbers, masons and bricklayers that use manual tools and even chemicals for repairs. One respondent from Phase I mentioned that when there was a blocked pipe in his apartment block, the artisans exhumed the pipes and replaced them with new ones thus:
We contacted them and they came and gave us a bill, which we divided equally among the occupants and paid them. They inspected the damage and they said they suspected pipe blockage and there was a little bargain and eventually it was probably about 5 - 10% cheaper than what they quoted (Wuse07).

**Effectiveness:** These strategies are moderately effective in coping with problems related to water/sewer services as they satisfied two evaluation criteria. One, respondents have reported that these options are very successful in fixing the problems because the artisans were easily accessible, quick in doing the repair work. Second, the strategies are reported as quick and their costs were moderate. For instance, one interviewee from Phase II noted that: “it is better to engage the plumbers and let them solve your problem there and then and you pay them and they go” (Utako02) because the plumbers live closer and they “respond very quickly in fixing the problem than the water board” (Asokoro03). A few comments about the efficacy of this approach were: “so far so good, it is efficient” and “it was very successful; they will do it for you very well” (Wuse06). A respondent in Phase I also commented on the performance of the artisans he hired thus: “you hire them and they do it for you within the time period that you agree with them, so they are effective” (Garki08). Other interviewee’s experience with the informal sanitation services was:

It is a quick something because we were able to call the person that day he was able to do it and we forget about it once and for all. And you pay a minor amount, which we do not bother much about the money (Garki07).

However, while using private artisans has some merits; households bear the cost of the repairs, which are supposed to be part of the responsibilities of the utility agencies. Another downside of using the services of private companies for sewage evacuation from septic tanks is that, “even if you have the money to pay the people to come on pack it, they may not be readily available immediately” (Utako06). Some respondents expressed their fear that some of these artisans could be criminals. There was also a concern about whether the informal artisans are specialized to handle complex repairs on the water/sanitation infrastructure because in some cases the repairs do not last. This is because, “entering a sewer line and repairing it is a professional thing” (Utako02) or as noted by this respondent from Phase I:
“I do not think the local people have the capacity; people will have to be experienced or trained particularly in the area for them to be able to handle it. A commercial plumber may know how to screw and unscrew a pipe. What does he know about the general plan? He might see a short term solution of cutting a pipe and sealing it but what about where the pipe goes from there? (Garki02)

5.1.3 Quasi-Exit Strategies

These refer to leaving the public services temporarily for alternative options when the services are unavailable or inadequate and coming back to them later when the situation improves. In comparison with public services, these informal strategies have been described by one respondent as: “Devils alternatives. If there is a way I can have both it is fine. So that if one fails, you can fall back on the other; I hope it is feasible” (Utako07). The following section presents quasi-exit strategies for each of the services and their efficacy levels.

(a) Quasi-Exit for Water Supply: When water supply is unreliable, residents devise alternative coping strategies to deal with the situation, which they fall into five categories:
I- water storage (utilized by 51 respondents); II- buying water from vendors (48); III- drilling of boreholes (19); IV- fetching water from other areas using cars (28) or women/children (20) and V- obtaining water from surface water bodies (6) and rain (7). What makes water storage the dominant strategy was perhaps being cheap because of having tap water at most homes to store, the containers being affordable as households can use any types and the ability to have adequate water during scarcity. While the main determinants of water vending and borehole options appear to be affordability and location within the city as they are both banned in some areas, borehole is also specifically determined by home ownership and type of housing. Households who have cars and children appear to be more inclined to fetch water from neighbors or public buildings and surface water. Details of the findings on these strategies are provided in the next sections:

(i) Water Storage: 51 households stored water in containers like buckets, cans and other vessels while a few others use surface and overhead metal/plastic tanks (see Figure 5.1) with capacities ranging from 1,000 - 5,000 liters. Another form of storage was through the use of water filters or “sterilizers”. Piped-water supply often goes directly to the tanks from where
pipes are connected to various parts of houses. Residents often buy water from vendors or fetch from rain and store. Water storage as a strategy depends on when the tap water is available as households often have to be “monitoring” (Asokoro01), the capacity of the storage containers and whether residents are around at home to store water. The approach is typically done late evening when children have returned from school and the water pressure is higher as this quote illustrates:

*We tell the children that if water comes, please fetch and fill all the containers, because they need the water to take bath in the morning and night when they are going to bed, so they will fetch it. (Asokoro01).*

**Figure 5.1: Overhead water tank in an estate in Jabi, Phase II (Source: fieldwork)**

**Effectiveness**: The efficacy of water storage is high as it satisfies all the three evaluation criteria. First, households who used this strategy felt satisfied since they usually store adequate water that last for the duration of outage. According to a household, “*my tank can take up to two days without any problem, it hardly get exhausted, I think it is successful I am enjoying it very well*’ (Garki06). Another interviewee commented that: “*water storage goes a long way in alleviating my water shortage*” (Garki09). One other advantage of storing water is that the water is from safe source and it is free for households with piped-water connections in their homes. The quote below also highlights the merit of this approach.
The only thing I am thinking is if I'm still in this house I will need an overhead tank. That would really solve the problem; the tank can store enough water to last me up 3 to 4 days (Garki04).

There are also a few disadvantages of this approach. Household have to bear the cost of buying storage vessels as one respondent noted: “we have storage inside and we have storage outside; it is totally unnecessary” (Utako07). They often have to stay all night to collect water, which some residents considered as tedious. Similarly, storing water for a long time could lead to contamination especially when using open containers. Large family households often could not store sufficient water that would last during long water shortage. Also, those using the overhead tanks often have to connect it to a machine that pumps the water into the tank as water pressure is seldom adequate.

(ii) Water Vending: The study found that there are two types of water vendors operating in Abuja city; the Mairuwa (Hausa name for local water vendors who use hand-push carts) utilized by 48 respondents. The second, motorized water tankers/trucks, is much less frequent used by 15 interviewees. Low-income residents are more disposed to use the first option because it is cheaper as small quantity of water can be purchased and it does not require huge storage vessels unlike the tanker option, which is the opposite. Use of water vendors also depends on time and being in suburban districts where the option is not banned. More details of these approaches are presented below:

■ ‘Mairuwa’: They are local vendor that push locally-made push carts and sell water inside 20-25 liter plastic cans (see Figure 5.2) for 20-50 Naira each ($0.15-0.35) and up to $1.00 depending on demand. Thirty seven households mentioned that they utilized this coping strategy but mainly for domestic uses like bathing, cooking and washing clothes and plates and the few who admitted drinking the water, they boiled it. Observations and interviews found that these vendors go around neighborhoods where they know there is dearth of water to sell water or the residents go to Mairuwas’ “joints” to buy and the latter would then transport the water to the buyer’s homes. Mairuwas buy water from borehole owners or fetch from public taps in the districts where water is available. Purchasing the water is first come, first served and sometimes it is for the highest bidder. A respondent in Phase III mentioned how the Mairuwas operate:
These guys are private and most of them are from Niger Republic and come to Nigeria to get their daily bread. So when there is short supply of water in particular area, they used to identify the area and go somewhere and find a tap where water is running full speed and they get the water and distribute in the areas where there is shortfall (LifeCamp01).

Figure 5.2: Mairuwas buying water from a residence in Mabushi, Phase II (Source: fieldwork)

**Effectiveness:** The Mairuwa approach scored low in efficacy as it satisfied only one of the three criteria; being a successful way of solving water shortage problem. Respondents considered it as a quick and reliable way of buying just the quantity of water required during shortage, which can be as little as 20 liters. Further, the Mairuwas can “go to any length; to faraway places to fetch the water and bring it to residence” (Utako04). Other positive comments about the approach were: “it is much helpful”, “successful” and “it solves your water shortage problem at that material time” (LifeCamp03). On accessibility, a respondent from Wuse noted that: “they are always roaming on the street; you just shout on them and they come” (Wuse04) and another believed that it is generally effective: “you see them and you buy; it is cash and carry” (Garki08).

But, this approach is often expensive because: “when the water scarcity bites so hard, they [Mairuwa] jerk up their prices so high and sometime to ridiculous level” (Garki04). Similarly, the water may not be all that clean because its source is not certain nor the hygiene of
the containers in which the water is transported. As such, WHO (2012, p. 32) categorized it as unimproved water source. Personal observation documents a few Mairuwas fetching water from a broken water pipe and “at times some of them even go to stream to fetch the water they sell” (Asokoro03). This is also corroborated by a local newspaper interview with one vendor who admitted fetching water from a river. One more issue raised during interviews was that occasionally the Mairuwas were hardly to be found, especially at early morning hours or late evening when they are needed the most because of the demand from different people and households often have to go around looking for them. Further carrying the water to inside of homes is considered “tedious and stressful” (Jabi03) especially for those living upstairs.

**Water Tankers:** Water tankers that sell water to residents operate in Abuja and they are of three kinds. First, commercial water tankers run a business of selling water. Second, were drivers of water tankers owned by construction firms and other private companies that deliver water to construction sites and to the residence of their senior officials respectively. These tanker drivers sell water to individuals. For example, a respondent bought water from the drivers at the cost of 3,000 Naira ($200) for a tank. Lastly, water tankers owned by Abuja Water Board which usually supply water free-of-charge to privileged government employees during shortage (they sell water too) as a senior staff of FCDA stated:

*If there is no supply at all, we used to make request to the water board directly, we give our names and house numbers, and make request directly to the director, so the official will dispatch water tanker to our area (LifeCamp01).*

**Effectiveness:** Similar to Mairuwa, the water tanker option satisfied only one the evaluation criteria of strategy efficacy. According to a respondent, the approach is successful in alleviating water shortage because, “if you pay they bring water” and another one said that: “they have [cell] numbers and you copy the number and if you need water you call the person running the business you tell them your location and they bring it” (Asokoro01). For Water Board tankers, its merit is that water is free for the state officials that were supplied by the agency. Similarly, senior employees of the private companies obtain water from their corporation’s tankers. One other advantage is that households who purchased water from tankers owned by Water Board or construction companies get water below the commercial value.
However, similar to local cart-push vendors, commercial water trucks have been designated by WHO as unimproved water because its source is unknown except those supplied by Water Board. Moreover, tanker approach is expensive and depends on whether households can afford it, like somebody “who is financially buoyant” (Utako04). There is also the requirement to buy the whole tank of about 1000 gallons at “exorbitant prices”, and possession of large storage facilities. One respondent also claimed that water tankers and vendors often connive with the staff of water board to “take off water” in the city, so that: “they keep on becoming relevant” (Utako02). There were also cases of delay in getting the water since it is not immediate; customers have to book for the water and even after booking, the tanker driver may decide to sell it to another person who is not on the queue but willing to part with some “tips”. One resident also stated that water tankers are not available at certain times (like in the night) when users are in dire need of water (Gwarimpa04). Another con of takers from water board and private companies is that the free water supply excludes households that are not employees of the private companies and government agencies respectively.

(iii) Boreholes: Nineteen respondents reported having borehole in their home as a way of coping with water shortage. The system is operated by a machine that draws water from the ground and pumps it to the surface. Some households have connected their boreholes to taps via filters or to tanks from which it then supplies the whole house. According to a resident of phase III: “there are two systems of water supply; there is water board and the other is borehole” (Gwarimpa05). To be able to build a borehole, permission has to be sort from the FCDA, which does not allow it in Phase I and in the districts of Phase II that have been connected with city water. In several estates and gated communities, this option is provided through collective efforts of the community as mentioned by this respondent:

In some districts that the situation is really bad, they resort to sinking their own boreholes. In effect they are having their own alternative water supply; they sunk the borehole, they have overhead tanks they have ground tanks. Some of them go into the extent of having mini water treatment plant. I know a few that have resorted to that. It is just a small plant that has a chlorination chamber and filter (Garki08).
Effectiveness: The borehole option has moderate efficacy level as a coping strategy because it met two of the three yardsticks of measuring its efficacy. First, households described it as successful, convenient and reliable option that provides continues water supply. A respondent related that: “it is very effective because if you have your borehole, you always have water” (Utako04). Another interviewee from phase I pointed out that if he lives in other parts of the city; he would definitely drill a borehole and just forget about water shortage because, “it is more guaranteed than any other sources” (Garki02). Boreholes provide a sense of control over the water supply unlike the city water that, according to one respondent, “you turn on the tap expecting water but find nothing”. Second the WHO has designated the water source as improved. This option also has an economic benefit because some households do sell the water to Mairuwas or other residents. One resident of Asokoro has this to say on the efficacy of the borehole option:

Even if there is no water from the water board we don’t even noticed, because it automatically takes over. There was a time that they were constructing the roads and the water board pipes were removed and we have to use the borehole for 3 month which of course it served the purpose. So it has been very successful (Asokoro02)

The major disadvantage of the borehole option is that it is, “beyond the reach of the poor”. According to some estimates, at least $4,000 (600,000 Naira) is required to drill one after a lengthy bureaucratic process of getting a permit from FCDA. One household in phase II argues that: “the borehole is not an easy task; it is very expensive to either have one or to maintain it” (Utako06). Similarly, borehole system can spoil or block when unused for long time and in these instances it has to be fixed. It also needs periodic maintenance by “flushing” the system by an expert to make it run efficiently. Another disadvantage of borehole is that seasonal water level variation leads to low water output or when other boreholes are being dug close by. Other issues include light outage that affects its functioning and water quality that may be poor requiring treatment with alum, water filters or chemicals. Eighteen households indicated that they do drink the water from borehole, others use it only for domestic chores as one of the residents put it:
One of the disadvantages is that it’s not good for drinking, you cannot wash your car with it; it spoils the paint. You cannot wash with it. If your cloth is white, over time, it will start turning brown (Gwarimpa05)

(iv) Fetching Water from Other Areas and ‘Begging’ from Neighbors: These strategies can be classified into three kinds: (i) the first used by 32 residents is fetching water by family members from nearby public or ‘begging’ from neighbors that have big storage tanks during shortages and (ii) the second is less frequent involving 28 respondents who drive cars to fetch water inside cans. Figure 5.3 below is a typical illustration of the first approach undertaken mostly by women and children who used buckets and other vessels to fetch water. One lady who lives close to a public hospital in Phase I revealed that: “I have children, my girls, who went and fetch within the hospital premises” (Asokoro05) and another resident of Life Camp narrated the following approach as their source of water during shortage:

We have two privilege neighbors that are able to sink borehole in their compound. So anytime the problem persists for a day or there about we go to their houses. Their doors are always open they give us access to water (Lifecamp06).

Figure 5.3: Women and children fetching water from an orphanage. (Source: http://nativity-nigeria.blogspot.com/2010/04/clean-water-in-abuja.html)

Twenty eight respondents have used their cars to fetch water from places of work, religious buildings and other public establishments (see Figure 5.4). Households typically obtain
water inside plastic cans when they close for work and transport them inside their car trunks. During shortages, households also get water from and friends’ houses in other districts where there is water as one respondent used to makes phone calls to find out where there is water and then drive there to fetch. Another interviewee described how he once used this approach:

*When I come to the office, I would put about 4 or 5 jerry cans in the back of my car then fetch water from the taps in the office because it is in phase 1 that is where most of the infrastructure and facilities have been fully provided while we in the suburb we have to rely on the water that we fetch from here and take it home for our family to drink and do some other things (Gwarimpa02).*

During water scarcity, a few households also indicated that they or their neighbors “begged” for water from neighbors who have boreholes or large water storage facilities. Mostly women and children appeared to carry out this task. Even if there is water but the pressure is low, household living in high rise often go to their neighbors living on the ground floor to ask them to fetch water from their taps.

*Figure 5.4: Using cars to fetch water from a mosque in Phase I (Source: fieldwork)*

**Effectiveness:** These strategies are evaluated to be moderately affective as they satisfied two of the three criteria. First, the water quality safe as the water is obtained from public tap or neighbors who have boreholes; both sources designated by WHO as improved. For example, a
respondents who used his car to fetch water stated that the water quality is guaranteed because the source of the water is known: “you’re getting piped water, which is the same water you get from your house” (Garki08). Second, respondents also stated that fetching water is a successful way of coping with water scarcity because it helped during shortage and the water is free and households don't really have to go far to get the water as one interviewee noted: “mostly these problems of water are localized; you may find out that the next district may have water” (LifeCamp03). Those respondents who allowed their neighbors to fetch water said that they did it “on humanitarian reasons” (Asokoro02) and another mentioned that, “we tell our security gateman that he should allow people to come in and fetch water, because we are our brother’s keepers” (Utako06). An interviewee from Wuse also indicated that he has a neighbor who owns a very big overhead tank, which supplied his household with water so that he does not have much of a “hassle” to go far looking for water elsewhere (Wuse05). Another respondent also remarked on the effectiveness of fetching water from neighbors thus:

The houses that have boreholes are accessible. So anytime there is a problem, we will go to their houses, and there are no issues. You just knock at their gate and the gateman will allow to you fetch. As a matter of fact, one of them put two taps outside the gate (LifeCamp06).

Nevertheless, there are also several shortcomings of these approaches. In the case of fetching water from public taps or “begging” from neighbors, the approaches are tedious because water is heavy and the children have to carry kegs and buckets on their heads, often to upstairs, and they have to queue and they are often unsuccessful in getting the water when they are turned back. A father and a mother from Phases II and I who sent their children to beg for water from neighbors seem uncomfortable with this approach as they remarked respectively:

Definitely sending girls to fetch water they face problems. At the neighboring quarters they go, their meter is reading when fetching water; they are using water board and definitely they will not be happy for a neighbor coming from other areas to come and increase their water bills. Sometimes we use to face a lot of challenges; at times they send our children back, and then the only alternative is to buy water from the vendors (Utako01).

Sometime they are allowed to fetch and sometime they don’t be allowed to go in… I don’t like the insult of going and you go and not allowed to fetch water and
you come back; it is a kind of disgrace for me. So the best thing is not to go at all” (female, Asokoro 04).

The disadvantages of the option of using cars to carry water is that one has to have a car, containers and time to drive and “scout” around the city to find where there is water to fetch, which could be a far distance. The approach has also been described as “tedious”, “very difficult” and “inconvenient”. Since water is heavy and cars are not meant for that, this option could spoils cars or as one resident expressed it: “kills shock absorbers of somebody’s car”. The following comments highlight some of the difficulties of using this approach:

*The problems were of transporting the water here and there. You have to put it alongside with taking children to school or going to work or going to the market. These all put together destabilize our programs* (Wuse05).

*You have to use your car, it is time-consuming, and in fact all your activities have to be suspended because you have to look for water. If you look at houses here in Abuja they have water system and on average they have large family so you have to be fetching water for the whole day* (Garki06).

**(v) Obtaining Water from Rain and Rivers/Lakes:** While seven respondents obtained water from rain, none fetched water from streams/rivers and lakes. But six interviewees claimed knowing neighbors who obtained water from surface sources but mainly for domestic uses like washing, bathing and to “keep the toilet and other things going” (Garki04). For example, one respondent from Jabi district in Phase II revealed that:

*Some people in my quarters, because we have Jabi River, some people in the barracks because of this problem with water, they used to go to the river to wash their closes or fetch for domestic use apart from drinking* (Jabi02).

Another coping mechanism with water shortage, supported by observation, is fetching water from busted water pipes. Two respondents also witnessed other households collecting water from busted pipes though the study could not find the actual cause of the burst.
Effectiveness: While obtaining water from rain satisfied two criteria and thus considered as a moderately effective strategy, the efficacy of fetching water from surface water bodies is low as it is only successful in solving households’ water need. In the case of obtaining water from rain, respondents maintained that the water is free and cleaner than that from stream/river (WHO categorized rainwater as improved water source) though the hygienic nature of the water depends on whether it is collected from open sky or through roofs. Furthermore, this option is feasible only during the rainy season and the residents don't have control over when the rain will fall. It also depends on whether households are at home when it is raining to collect water. Similarly, those that live upstairs cannot obtain water from rain except if they come downstairs as several households admitted doing. The disadvantages of getting water from streams/rivers and lakes are that the water is unsafe for drinking, cooking and washing of clothes/plates as the WHO has classified it as unimproved source of water for that purposes. Similarly, only residents living near by the water body could benefit from it.

(b) Quasi-Exit for Refuse Collection: When refuse has not been collected, respondents have devised three ways of coping with the situation as: (a) eighteen hired informal refuse collectors; (b) eleven personally disposed their garbage using children/house servants or cars; and (c) three burned/buried their garbage. Delay in garbage pickup and its accompanying consequences of odor and health threat often compel residents to hire people to collect the refuse. This is usually through a collective effort by neighbors or resident’s association. The second approach is determined by quantity of garbage generated that will allow it to be carried by children or inside car trunk and distance to the disposal points and as such undertaken at individual household level. The last approach is the least utilized, which depends on having space to burn/bury the garbage and the garbage being burnable but not organic matter. The following sections discuss these strategies at length:

(i) Informal Refuse Collection: Eighteen residents hired scavengers or youth who move around with carts and wheelbarrows to specifically dispose garbage for a fee (see Figure 5.5). According to one interviewee, the approach is simple because there are people going about looking for menial jobs that can be paid to “throw these things away” (Durumi). One resident in Phase II indicated that: “if you call them, they will charge you and you negotiate and they carry
it out from your house to may be a central dustbin” (Utako04). These informal refuse collectors have a place where they normally assemble for customers to hire them (e.g. the Utako village). In neighborhoods that use centralized collection bins, respondents contributed money and hired collectors that use pickup truck to dispose the garbage. Some interviewees hired tippers that brought sand to construction sites and instead of going back empty, household paid them and they took the garbage, “away from our surroundings” (Wuse04).

Figure 5.5: A scavenger collecting refuse in Mabushi, Phase II (Source: fieldwork)

**Effectiveness**: Refuse collection by the informal sector is considered moderately effective in dealing with garbage problems because it satisfies two of the evaluation criteria; being successfully getting rid of the garbage and at moderate cost. According to a responded, the approach is: “equally effective as refuse collection by government” (Garki02) because it is immediately and the collectors can be found nearby. It has also been described as: “the best way”, “successful”, and “it went very well” (Utako01) and the scavengers “did a wonderful job” (Garki03). Another advantage of informal refuse collectors is recycling of plastic and metals.

On the negative side of using this strategy, the scavengers and laborers that used wheel barrows or carts often dispose the garbage anywhere that is convenient for them such as on empty plots, uncompleted buildings or inside water bodies. This option is also becoming difficult because empty plots have either been development or fenced. One other disadvantage of this
option is that residents have to pay the commercial collectors even though they are expected to pay their annual bills to AEPB regardless of whether refuse is evacuated on time or not. This resident noted that it is more expensive to hire a truck to dispose garbage thus:

_He [truck driver] took little more trips because the vehicle he was using was smaller and by the extension it just cost us a little more. It is obviously going to be more expensive than the organized and that it is adhoc and than we would be paying for his services commercially and not at any subsidized government rate._ (Garki02)

**(ii) Personal Refuse Disposal:** There are two variants of this approach. The first can be termed environmentally friendly because it involves carrying refuse inside car trunks or sending children or house servants (gardeners, guardsman, nannies, cooks, etc) to empty refuse inside large containers at neighborhood commercial centers or public buildings and “hope that it can be collected from there”. The second approach is improper dumping of refuse “somewhere” usually at night. A respondent was bold enough to say: “I use to dump it in uncompleted building” (Gwarimpa02). Interviews and observations indicated that other dumping grounds are lake/streams and along road sides. In the central city where empty lots and uncompleted buildings are not available and there are a many eyes on the streets, household heads or their drivers often drive to the outskirt of the city and dump the refuse as a respondent from Phase I admitted doing:

_I just put them in black bag and drive to another place and throw that into the bush. Where I was before there was a bush where people always throw their refuse so you don’t even notice refuse. Some also dump in the lake (Asokoro01)._ 

**Effectiveness:** The efficacy of personal disposal of garbage is also scored low because its only advantage is perhaps being free in monetary terms but viable if the refuse generated is not much allowing it to be carried inside car trunks or for the children to carry it on their heads and walk to the disposal centers. But these approaches have many shortcomings. Concerning the first option, where household dump their refuse at commercial centers or public buildings, a respondent argued that such areas experience high overflowing of refuse because: “there was nobody there; the shop owners may be in their shops when the people are dumping the refuse. So they may not even see them to complain” (Garki08). Similar comment from a lady is that: “when
they dump it in another place, it is compounding the problem; it is like removing problem from one place and transferring it to another” (Garki03). Another respondent pointed out that, “people that are not even clean, don’t like garbage near them so they sweep it away from their side to other person’s area, but the problem is that the refuse is still within the same neighborhood” (LifeCamp03). Regarding using car for garbage disposal, it is inconvenient and it also makes the car dirty.

The second option of dumping refuse improperly has been described as: “illegal”, “not advisable” and “not acceptable” or as one interviewee pointed out that: “I don't think it's the right approach to dispose refuse; they may not dispose in proper place” (Wuse02). When asked about whether she personally disposes her refuse, a lady from Phase I answered: “when you take it from your house where else do you take it? Are you taking it to another person's dump or are you going to dump it by the main road? Is it good; illegal dumping on an undeveloped plot?” (Wuse03). Further comment was:

They just dump it on the street, which is not the best thing to do. By using that approach you displease somebody. Definitely, even people passing by the roadside will be inhaling the odor; it is not hygienic (Garki03).

(iii) Burning of Refuse: There were only four cases of households who individually or collectively incinerated their refuse as a means of coping with uncollected garbage. A respondent in Phase III once instructed his guard man to burn their garbage (Gwarimpa04). Also, another interviewee from Phase II stated that every Saturday they conduct a kind of “general sweeping” of their residential compound and after which they dig a hole so that every household would carry his own waste and deposit it there and then “set the refuse ablaze” (Utako01). Figure 5.6 is an example of refuse burning observed in Jabi district in Phase II.
**Effectiveness:** The efficacy of this option has been evaluated as low because its only merit is that incineration reduces trash and as one resident of Phase II mentioned: “*burning cost nothing and it is easier*” (Utako01). Another respondent even recommended that: “*if they can situate incinerator for some block of house; it would solve a lot of the problems; it is more secured than risking your health*” (Garki02). In the cities of developing countries where the use of sachet water is very common, a resident of Phase I opined that since the plastic water bags do not decay: “*they are really not good for the soil, so we can be burning them so that they would not be scattering and littering the area*” (Asokoro05).

While this cost-saving strategy helps in getting rid of garbage, perishable food and wet items cannot be burnt even when households have the space for incineration. Additional snag of this approach is health and safety hazards like possible fire outbreak. As such, some interviewees detested burning garbage with comments like: “*it pollutes the air and cause health problems*” (Jabi03) or “*it is not the best approach, it is dangerous*” (Jabi04). Similarly, a resident of Phase I felt that: “*refuse collection by professionals to designated places to be disposed of it properly is the best solution than incinerating*” (Garki 02). The following quote also reechoed the ineffectiveness of the strategy:

*No it can never solve that problem. It is very disastrous because of the smoke we inhale; the flame of the fire, you know, can lead to other things different*
especially in the Hamattan season. So that method is not even advisable (Utako01).

(c) Septic Sanitation System: This system, illustrated in Figure 5.7, is a temporary alternative to the public sewer system in Abuja and it is locally built during house construction to serve individual houses or a block of apartments in the areas that are yet to be connected to the centralized sewer system. When the sewer system became available resident usually switched to it but three interviewees choose to remain with their own septic system because, according to them, it is very expensive to connect to the central sewer system.

Fig 5.7: A septic system under construction in Kubwa. (Source: http://bioapplications.blogspot.com/2009/03/harlemson-apartments-kubwa-abuja-bio.html)

Effectiveness: Septic system is highly effective as a coping strategy because it satisfied all the three criteria. First, it is a successful sanitation system for households that live in districts not yet connected with the public sewer system. Second, the system is easy to manage because it is usually owned by a single household and most of the tanks are cheaper to construct using local masons and building materials. Additionally, its owners don’t have to pay any bills. Lastly, the WHO has designated septic system as improved means of sanitation (WHO, 2012). Regarding the disadvantage of this system, one interviewee from Phase II noted that: “the central sewers system is the best because you don’t bother yourself about looking for vehicles to come and evacuate the septic tanks when it gets filled up” (Utako06). Another issue with the system is that
it could collapse or gets filled up without knowing until: “you see it leaks out and started overflowing on the ground” (Utako06). Also several homes that are located in private estates or apartment blocks are connected to a single septic tank that often cause dispute of how to fix a problem or who is at fault or how much financial responsibility each household should bear for evacuating the tank when it is filled up.

5.2 Voice Strategies

Respondents, individually or as groups, reported their dissatisfaction with the provision of the services by complaining to the relevant utility agencies or held meetings to address the issues. They typically visited Water Board and the AEPB customer offices located at various districts in person or make phone calls to report problem. Complainants’ addresses and nature of the problems are usually recorded in a log book. There were also a few cases of respondents voicing through emails, radio and television stations and the print media. Most respondents complained about water followed by sanitation and then garbage collection. This is not surprising considering the necessity nature of water and sanitation compared to refuse services. Similarly, fewer complaints about garbage collection indicates that it appears to be performing better than water supply and sanitation because it is handled by private contractors unlike water and sanitation services that are provided by the public utility agencies.

This study reported 13, 12 and 10 complaints to utility agencies by residents’ associations about water, refuse and sewer problems respectively. This kind of complaining was highly effective in getting service-related problems solved as they have the required resource (organization, social capita and funds) to ensure prompt response from the utility agencies. Similarly, 15, 14 and 17 respondents have collectively complained with their neighbors about water, refuse and sewer problems respectively but this kind of voice was less effective than that of associations, while individual households often receive little or no responses from the agencies and it was much less frequent involving 16, 8 and 9 respondents respectively for water, refuse and sewer. Thus next three sub-sections highlight more on these strategies.

5.2.1 Collective Voice Strategies

Households came together as groups of neighbors directly affected by utility problems or through formal residents’ associations to report problems to the utility agencies or meet to
address the issues outside the public sector. They also organized to pay utility bills for shared services, or to use quasi-exit approaches like hiring informal workers for refuse/sewer disposal or for repairs works on water/sewer network. Another kind of collective voice is by formal residents’ associations, which are predominant in estates and gated communities, and one or more officials are usually delegated to complain on behalf of the community. A respondent in Phase II illustrated how collective voice is exercised through one of the associations:

We contribute money at the beginning of a year, which takes care of light, refuse collection, water bill and the security of the estate. So we contribute money, and put it in an account that we withdraw when the needs arise and pay for services (Utako06).

For each of the three services, the next section presents the use of voice strategies in response to dissatisfaction with service delivery.

(a) Collective Voice for Water Supply Problems: 15 respondents indicated that they collectively complained to water board together with neighbors and 13 through their residents’ associations. When a problem of water shortage was caused by pipe burst as a result of road construction, residents complained to the constructor responsible. Some respondents living in apartment blocks who shared water pipes or meter indicated that they meet periodically to pay bills or organize to address any problem through either voice or quasi-exit. For example, a respondent from Phase I narrated that when a shared water bill was brought he went around their apartment block “shouting” that neighbors should pay their share of the bill because: “they [water board] said that they will disconnect by this time tomorrow” if the bill is not paid (Wuse03). The following quotes illustrate two cases of collective voice with regards to water supply problems by an association and a group of neighbors in Phases III and II:

Whenever there is no water and the shortage persists for at least two days, we used to write a formal complaint to the Water Board stating the time when the shortfall started and the number of houses affected and if there is anything they can do (LifeCamp01).

We have a committee in the compound. So they went and met the manager of the water board. And he promised that he would do something about it. One is that
they will make sure that the meter reader is going constantly to read the meter accurately. Second he promised that that would reduce the bill that has accumulated. Initiated they give us a bill of several hundred thousand Naira (Jabi02).

Effectiveness: Residents’ associations and group of neighbors are highly and moderately effective in solving water supply problems as both are convenient and not expensive but the first approach is more successful in solving a problem than the latter. The responses were divided with regards to the success of collective voice in improving water delivery. There were few incidences that after reporting problems to water board, the officials responded by sending maintenance staff to fix the problems. For instance, when there was a problem of billing a residential estate for the employees of State Security Services in Utako district, a resident of the estate indicated that they were successful in getting the bill reduced to 300,000 Naira ($2,000), when their representatives met the manager of Water Board (Utako04).

On the other side of the coin, some cases of collective complaints to the utility agency were unsuccessful or delayed. For example, when a group of residents of Garki in Phase I reported busted water pipes they: “kept expecting them [water board] to come and do something, but they refuse to do” (Garki03). After another complaint for a broken pipe, the response from water board was: “kindly wait, the maintenance staff will be sent to do repairs, but they did not come” (Wuse05). Another resident who had over-billing problem with water as a result of classifying their residence as industrial attested that:

Reporting to the authority has not been a very quick response. Like the issue of billing I talked to you about, it took almost a year for the issue to be resolved and in between we had a serious of disconnections (Wuse07).

A sample of comments about the inefficacy of collective voice by neighbors include: “they promised us to look into it; up to this moment actually they did not rectify the problem” (Garki05), “we spent about a week after making the complain before they came” (Gwarimpa04) and “we complain to the water board whose mandate is to provide water to the FCC and they have not done anything” (Garki07). Another respondent from Phase II mentioned that they met the manager of Water Board about billing problem who promised that they are going to do something about the problem, but he did not do anything (Jabi02).
(b) Collective Voice for Refuse Collection Problems: Based on personal observation and interviews, AEPB has installed notice boards in residential districts with schedules of refuse collection and the name of company responsible for each district and telephone numbers to call the agency when there is any problem. But, some residents reported cases of non-collection of refuse directly to the collection companies or their staff that pickup garbage from homes. For example, one resident of Asokoro living in apartment house narrated how they collectively voice that: “the whole tenants of my house we gathered and laid the complaint to the AEPB about the bill” (Asokoro03).

Sometimes the complaint is not directed to the agency but to neighbors against dumping garbage outside the bins or littering the ground (Gwarimpa03). For example, a lady stated that she and her neighbors have just been complaining “in the air”; to each other among themselves saying: “why is this place smelling and why they can’t come to pack this [garbage] or people should heap well” (Asokoro05). 12 cases of residents associations involved in collective voice or organizing to address garbage collection problems through other ways were found. Even without formal associations, 14 concerned neighbors come together to collectively voice as illustrated:

We selected at least two or three people to go to the office and tell them the area we are coming from and this is our complaint; one person per each block and tell them why they are not packing the refuse. If it is a question of not paying their bills; you organize and share the bill and pay them and they come and pack it (Garki06).

Effectiveness: As in the case of water, voice by residents’ associations was more effective than by groups of neighbors for reasons similar to those of water. With regards to the success of this kind of voice, respondents reported that often after their associations complained to AEPB, the companies came later and picked the garbage. According to some interviewees, the response of AEPB to their voice was “immediate” or “prompt” (Garki08) and another asserted that he has never seen a situation whereby they reported to the agency and the garbage collectors did not to come and evacuate it (Utako01). Nevertheless, there were instances of inefficacy of collective voice, mostly by group of neighbors in solving refuse collection problems. For example, one resident noted that the AEPB officials respond at their own phase: “if they like they come, if they don't like they don’t” (Wuse07). After some interviewees reported problems, the
agency officials told them that they will get the contractors to come and evacuate the garbage but waited to no avail. So it depends on: “if you are lucky” as one resident of Phase II described the situation (Utako04).

(c) Collective Voice for Sanitation Problems: Households’ collective complaints about problems with the public sewer system such as blocked or overflowing manhole or broken sewer lines fall into two categories. The first reported by 17 respondents involves group of concerned neighbors voiced collectively to AEPB to 10 by residents’ associations. Residents also came together to organize and address sewer problems through quasi-exit. For example, a resident of an apartment block in Phase I reported a sanitation problem to the neighborhood committee, which in turns delegated some members who notified the AEPB (Garki07).

Effectiveness: Compared to water and garbage collection, complaints about sanitation are not as successful as its efficacy is moderate and low for residents’ association and group of neighbors respectively. Only in few cases, the approach is successful when the agency responded “instantly” or “promptly” in fixing the problem. According to an interviewee from Phase I, few days after complaining about sewer overflow in his neighborhood, the agency staff came and “worked on it” and no payment was asked (Asokoro03). When asked about the success of collective voice about sewer problems, one household from phase II felt that it is effective since the maintenance workers are professionals in their field and can handle the job very well (Utako03), and another one added that: “definitely they know how these places were connected; they can easily detect the area where the problem is” (Garki05).

However, there were several instances when households complained to AEPB, there were delays or no response at all but just “some excuses” such as the maintenance staff were somewhere else working, or there was no provision of money to take care of the problems. One responded said that: “we couldn't get anybody from the environmental protection to attend to the problem” (Wuse07), other commented that: “we kept on complaining to them and they deem not to come and do it” (Wuse03) and another mentioned that: “when we go to the office they would ask us to write, but they never come” (Garki08). Sometime when the staffs were doing repair work somewhere else, households had to follow them to that place and transport them to come to their “rescue”. After one interviewee from Phase II reported a problem of sewer blockage, it
took “almost 2 to 3 weeks” before the problem was rectified (Utako01). It was “quite frustrating” (Durumi01) that after a meeting between a group of households in Durumi district in phase III and AEPB staff to fix overflowing sewer, the problem was not addressed on time.

5.2.2 Individual Voice Strategies

Sixteen, eight and nine interviewees that were directly affected by a problem with the delivery of water, refuse and sanitation services respectively complained individually to the relevant utility agencies. For tenants, some decided to complain to the landlord who then reported the problem to the agencies. Among the kinds of voice strategies, this is the least utilized. Possible determinants of this pattern are lack of success in prior individual complaints or the recognition that complaining collectively is more likely to be successful. This section describes these strategies for each of the three services studied.

(a) Individual Voice for Water Supply Problems: Sixteen residents said that they contacted Abuja Water Board about their discontent with water delivery personally or by their spouses or other family member. Some also reported the problems to the meter readers or the officials that distributes water bills.

Effectiveness: The efficacy of individual voice about water problems has been evaluated as low because it is seldom successful in solving the problems, after the inconvenience and cost of traveling to the water board offices. Respondents were divided over the success of this strategy. According to a few interviewees, the approach is prompt, effective or “very successful” in solving water delivery problems. For instance, one respondent from Phase I said that he got “positive response” when he reported a broken pipe (Garki05) and another said that the response was: “immediately; like in the next one hour, they came and solved the problem” (Wuse04). To other residents, the problems are solved but not at the time they wanted.

Individual voice was also found to be often unsuccessful in addressing water problems. One interviewee in Phase II believed that: “until you go and put pressure, before you can get them around to fix the problem” (Jabi03) and others claimed that “if you call the authorities they would tell you stories”, or “you can’t even find somebody to talk to” (Utako07). According to
one resident in phase III, “even if you voice out nobody would listen to you” so he stopped reporting (Gwarimpa04). Another interviewee in Phase I narrated his experience that: “I went there personally several times before they responded; initially they could not even know exactly the problem” (Wuse02). After a respondent complained about broken pipes and was asked to give money for materials, the agency officials bought “less-quality materials” (Garki01). Another resident who complained about prolong water outage in his neighborhood in Asokoro was told that he should exercise patient that a contract has been awarded to a British company to expand the water supply and the shortage would soon be a history (Asokoro03). The quote below also illustrates another case of unsuccessful voice:

First of all, you go to the office and lay complaint. They will tell you that they have men in the field and you may have to trace them to whichever part of the city they are. Sometimes you follow them actually, if not they will disappear. They will tell you that they will come and they may never come. It can be that bad (Wuse07).

(b) Individual Voice for Refuse Collection Problems: Only eight respondents individually reported to AEPB about garbage collection problems. For example, one household said that: “I collected their number from the dust bin and I called them [EPB]” (Asokoro02). Other cases of individual voice were: “my neighbor used to follow up with the contractor” or “[I] just spoke to the people bringing the bills that they should be bringing them on time” (Garki08). This was the least utilized among all kinds of voice. This is expected as refuse problems can be easily nd inexpensively taken care of by hiring informal collectors or using cars/children to dispose garbage.

Effectiveness: Unlike water, the efficacy of individual voice about garbage collection problems has been evaluated as moderate because this kind of voice is rarely successful in solving the problems and less inconvenient and expensive as the complaints can be easily tabled to the contractors collecting the garbage rather than incurring the costs of traveling to the AEPB offices. The option was mostly successful as a coping strategy. For example, some residents established that after complaints, within a short period of time the vehicles would come and evacuate the refuse or: “they will come; it is just a matter of some hours in a day” (LifeCamp01) or “there is usually a response and their services are quite effective” (Wuse01), or “it is good, if
you see refuse being piled up and you report you see action being taken; they are trying”
(LifeCamp03). One interviewee maintained that all you need to do is to report and they will come and pick the garbage and another mentioned that about 2-3 hours after complaining, the refuse collection trucks came and the “problem was solved” (Garki05) and another one insisted on using voice again if he is to face problem with refuse collection because “it works”. Other comments about its efficacy are: “they may be kind to come and pack it” (Utako04). A respondent in phase I narrated his positive experience at AEPB office, thus:

In my presence he [AEPB official] called one of the drivers: “why did the company refused to pass by so and so street? He [driver] said: “Oga [boss] we are busy, but right now we are very close to that place”. So within that day they came and collect the refuse (Garki08).

However, some cases of individual voice by households have not been unsuccessful. Delays and complete lack of response were the usual reported outcomes. Some households stated that when they complained to the AEPB office “excuses” were given such as breakdown of vehicle and that they should be patient. According to an interviewee from Phase II, going to the agency has never solved his garbage collection problem and another said that if a user complains, he has to wait, “until anytime when they feel like coming” (Garki05). There was a time when a respondent went to AEPB office and he could not see anybody among the customer service officials, as such, “you’re left with collecting your garbage” (Jabi04). Other reason was that the staffs of the collection companies could not come because they have not been paid their salaries (Wuse03). Another case of unsuccessful voice for garbage collection is:

We have complained several times to the refuse collectors on the road. We stopped them and told them that this is where we have some refuse. And we need them to come and park it and they said that they have some other work to do elsewhere (Utako04).

(c) Individual Voice for Sanitation Problems: Almost similar to refuse, nine respondents voiced to AEPB using phones or by visiting the district offices to lay complaints face-to-face. Another kind of individual voice is reporting problems by renters to their landlord or house caretaker who in turns voice to AEPB or hire informal refuse collectors (Wuse03). This excerpt illustrates how households typically exercise individual voice:
It is an individual complaint. When we go to the office they would ask us to write. They will give you a book and tell you to write your name and the location of the problem and we do, but they are not prompt (Garki08).

**Effectiveness:** The efficacy of individual complaints to AEPB about sanitation problems has been evaluated as low because it met only one of the three criteria – it can be convenient if phone call is made instead of going to the office. But it was rarely successful as only two cases out of nine were successful. One household believed that the approach was “okay and successful” (Utako04) and another who saw overflowing manhole on his way to office in the morning remarked that when he returned he saw “a very dry place” (Jabi03). Another interviewee indicated his intent to contact AEPB if he is to face sewer-related problem, because the agency has appropriate experts to take care of the problem (Garki09).

Nevertheless, six of the nine respondents who complained about sanitation pointed out that their individual voices were not successful because the procedure is cumbersome or when they reported the maintenance officials never came or instead of getting the repairs done within a day it takes weeks or months. The problem of delay is captured here by an interviewee from Phase I: “when you call them they will not come to do it until after about some months and it [the sewer] will be bleeding until after some time they will come and clear it” (Asokoro01). Other experiences of households with this strategy are that, “they are not effective; the few times that I know I ended up paying private contractors” (Garki08), or the officials only gave them flimsy excuses like “Oga [boss] never give us material” (Garki03).

Some households also expressed their unwillingness to report future sewer problems to AEPB because of reasons such as: “I don't think they would take action; the system is slow it is just like that it does not work well” (Gwarimpa05) or “anytime you contacted environmental you have to pay them although they don't give you receipt” (Garki04). Another issue of concern is that the AEPB maintenance workers do not work on weekends. Therefore, if there is any problem on the sewer network over the weekend nobody attends to it until Monday.
5.3 Loyalty Strategies

Within the context of developing countries and Abuja in particular, it is pertinent to categorize loyalty into “Loyalty of satisfaction” with the utility agencies or city when users are satisfied with the provision of urban services and “Passive loyalty of dissatisfaction” (loyalty in the EVLN model) as response to dissatisfaction with urban services, as discussed in this section.

5.3.1 Loyalty of Satisfaction

Interviewed households expressed this kind of loyalty to the utility agencies and city administration through praises and showing satisfaction with service delivery. In this study 22, 35 and 18 respondents expressed their satisfaction with water supply, garbage collection and sanitation services respectively. High loyalty about garbage collection indicates that it appears to be performing better than water supply, which is followed by sanitation. This finding is in tune with author’s experience of service delivery in the city and personal observation. Lowest satisfaction recorded by sanitation is also not surprising considering the complexity in providing the service, maintaining the facilities and funding requirements. Findings on this type of loyalty are presented below for each of the services.

(a) Loyalty for Water Supply: Twenty two respondents score water delivery high. On quality, the piped-water has been described as clean and without any taste and several households admitted that they drink it without treatment. For example, a resident of Utako commented thus: “in terms of the quality I can say kudu's to them because sincerely we are getting neat and clean water. By and large, I can say it is good; they are trying” (Utako06). The pressure has also been commended to be adequate for toilet flushing, shower, and can flow upstairs and into overhead storage tanks. For instance, a resident of Garki who lives on fourth floor reported adequate pressure in his home for shower (Garki07).

To some residents, the frequency of water supply was “constant” and scarcity was rare except during the dry season and a few interviewees even claimed that they have never had problems of water shortage. A resident of Garki stated that in his neighborhoods even if they store water after some time they have to throw it away because of steady supply (Garki05). The billing has also been described as fair at the flat rate of 4,000 Naira ($26) monthly for 2-3 bedroom apartments. The officials of water board have been commended for going around the
city to inspect if there are any broken pipes (Utako02). Personal observation also supported the evidence that the water quality, pressure and frequency are good for the few homes the author visited in some part of Life Camp, Wuse II and Garki districts.

Some causes of loyalty for water is that because problems with its supply existed for long time and also households have experienced low quality services in other cities, any little improvement often generates loyalty. For example, a resident said that water supply is okay because, “we don't have any before; because half of brave is better than none” (Gwarimpa04) and another commented thus: ‘I think the government is doing a lot because there are many neighborhoods in Abuja that have water; it is unlike other cities where you hardly see water from the taps” (Utako07). Several interviewees indicated that, unlike before, lack of water or low pressure and delay in fixing water delivery problems have reduced. For example, an interviewee from Wuse mentioned that “for three years, we experienced water shortage for about five days; I think it is not too bad” (Wuse05) and another in Gwarimpa, Phase III has not experienced any water shortage for the three past months.

(b) Loyalty for Refuse Collection: There is highest incidents of loyalty with regard to delivery of services because thirty five respondents agreed that the frequency of refuse pick-up has improved as also corroborated by personal observation and local news articles. The system has been described as satisfactory, “okay”, and “efficient”. Some respondents admitted that problems happened only once in a while and that garbage collection was more effective than water supply. One interviewee thinks that AEPB is doing their best in Nigerian standards and the partnership is “really working” so they should keep it up (Garki05). Most interviewees admitted having bins and few said that the bills were fair. This loyalty was most likely a result of the partnership with private companies because respondents referred to the old system when AEPB was directly collecting refuse as “bad”. For example, a lady from Asokoro acknowledged that the situation with refuse collection has improved: “it is better now than before. Before it was bad and now it is okay”. A number of residents pointed out that within an interval of 2-3 days the vehicles come and pick the garbage. Other comments about the partnership were: “it is very effective”, and “now the whole area is neat” and “I think they are doing good work considering all types of refuse we generate”
One resident recounted his experience of the old system when AEPB was collecting garbage:

There used to be only one refuse container where all residents dump. Before it was bad but now the services have been improved all houses now have bins and the frequency that have been used by the companies concerned now they come about 3 times a week; now we are satisfied with that (LifeCamp01).

(c) Loyalty for Sanitation Services: There were eighteen cases of loyalty with sanitation services by interviewees who admitted never having problems like spillage or blockage or they have never complaint about the sewer system. Some interviewees praised the system with comments like: “so far so good” and “the environment people are trying very well with regards to sewer line is concerned” (Wuse02). There were also few opinions that the sewer bills were fair and that the AEPB maintenance personnel, “satisfactorily” or “quickly” fix reported problems. Prior experience seems to also cause loyalty as a few residents pointed out that they have not been experiencing many problems with sewage recently or unlike before when it takes longer time to fix a problem, but: “now it is always solved immediately” (Utako03). Reasons for the low level of loyalty for sanitation have been given at the beginning of this section.

5.3.2 Passive Loyalty of Dissatisfaction

According to EVLN model, passive loyalty is a behavioral response to dissatisfaction by not exiting a service/neighborhood because of user loyalty to his assets (homes and friends) or declining to complain about service problems or refusing to criticize or providing excuses to the state because of ethnic, political or other affiliations with city leaders or employment in the public sector. Findings of this study on such kinds of loyalty are as follows:

- Loyalty Because of Employment: Ten respondents employed by the state said that they could not complain or criticize the state they serve but rather provided excuses or believed that the government is making serious efforts to extend sewer and piped water throughout city or that the state cannot do everything for the citizens. For instance, a respondent disclosed that he was one of the “voiceless” when it comes to complaining about water supply problems because he is a staff of FCDA and a lady said that, “we cannot complain against the government we
serve” (Wuse02). Another example was a case of a lady in Asokoro who believed that the agency would do “one or two things” to fix the problem of water shortage with time (Asokoro01). On water pressure, one interview felt that the agency: “is not given it much pressure may be they do not want their pipes to bust” (Utako06). Another respondent is optimistic by saying: “hopefully within the next 2 years they will be done with the expansion of the treatment plant and the tanks; they will wire the water and will be available” (Asokoro03). Similarly, another interviewee pointed out that he would not rush to report problem to water board, because: “they are doing their best and we do appreciate that” (Wuse04). Other excuses given to the agencies were: they have “few hands” (ref) and “we hope they are going to address the sanitation problem soon” (Garki01). Because Abuja is a capital city, the viable explanation of this kind of loyalty is that employments and/or businesses are mostly related to the state as such residents would not want to complain about services or castigate the government.

**Loyalty Because of Friends, Tribe or Political Affiliation:** Contrary to prior EVLN studies, this research did not find any evidence of loyalty to friends or cultural attachment to an area that prevented residential relocation. Affordability of housing overshadows these issues as respondents reported. Similarly, there was no evidence of loyalty to a political party or ethnic/religious affiliation that discouraged users from reporting problems or castigating the city leadership. This is not surprising for Abuja, which is a new town and cosmopolitan capital city where cultural ties are not strong compared to other traditional cities. Additionally, based on author’s knowledge of the city and prior studies, Abuja is not stratified based on religion or tribe but rather on socio-economic status.

**Loyalty Because of Assets:** Loyalty to one’s asset (homeownership) was found to withhold Tiebout-exit in the case of twenty three homeowners. For example, a lady said that, “people who live in their houses don’t just move because of water problems” (Gaduwa02). Because homeowners didn’t want to leave their current property, they stayed to bear with unsatisfactory services, hoping that the situation would improve. In the same vein, loyalty to employment in the public sector prevented some respondents to voice their dissatisfaction with the state.
5.4 Neglect Strategies

This author is of the view that neglect strategies can be better understood when they are categorized into ‘Complete neglect’; not complaining to improve the performance of the existing public services and not exiting to other service jurisdiction or temporary alternative services (quasi-exit) and ‘Partial neglect’ of not complaining to utility agencies. The first option is what the EVLN model referred to as neglect. This classification is necessary in view of the nature of basic services such as water and sanitation that people cannot neglect employing alternative strategies to cope with the situation. Neglects are destructive responses that are not meant to improve the situation or address the problems. As such, they don’t have any efficacy as response strategies. The next sections discuss the study findings on these two kinds of neglect strategies for the three services researched.

5.4.1 Complete Neglect: Lack of both Voice and Exit

Due to the basic nature of the services studied, there is no evidence at all of households not carrying out any coping strategies when they lack drinking water or their sanitation system is not working. However, 3 respondents completely neglected minor problems like leaking water pipes and 10 neglected sanitation blockage/seepage located away from their homes. On the contrary there were 38 cases of households that completely neglected garbage collection problems by declining to use voice or any of the exit strategies. Reasons for these patterns have been provided by respondents as well review of literature.

First, water and sanitation are necessities of life that completely neglecting them has grave consequences on the households because they are at higher hierarchy of essential services unlike garbage collection. One has to use water for drinking and other domestic chores and must answer the call of nature. As such neglect is almost impossible but complaints have to be made or problems solved through the informal sector. Second, the high neglect of refuse resulted from the awareness that even if the private contractors delayed, they would eventually come and pickup the garbage and as such residents do not rush into complaining or disposing the garbage through other means. This section presents the findings of this type of neglect for each of the three services starting with water.
(a) Complete Neglect of Water Supply Problems: When asked about whether they had a situation in which they face problems with water supply and decided not to take action to deal with the situation, 57 interviewees never neglected to find alternative to lack of water. Even if they do not voice they always utilized quasi-exit alternatives like storage, tube well, water vending, or fetching from other sources. However, 3 respondents neglected water supply problems like billing and broken pipes on the main lines completely without reporting to the authorities and because they were minor issues or the city law prevents residence from tampering with the central network. According to a respondent, there was a time when main water pipe busted in his neighborhood and, “water was oozing out from the pipes, but nobody cares for several months, nobody reported; nobody took any action that time” (Garki06).

Respondents generally reported that they always find alternatives sources of water, no matter how far, expensive or difficult it is because water is, “life”, “necessity’ and a “must”. As such, they always have to buy water from vendors or fetch from other areas. They advanced several reasons why complete neglect is impossible. One resident mentioned that water is used the minute individual wakes up until the time he goes to bed and another said that, “there is actually nothing you do that do not have the ingredient of water” (Wuse01) or by not taking any action the consequences in fact are going to be very serious as this interviewee from Garki illustrated:

You cannot live without water; it is a necessity, which you cannot do without. Immediately there is a problem with water we act individually or collectively to solve the problem. Especially since we have family, we need water for drinking, cooking, cleaning of the house (Jabi02).

Other consequences of lack of water have also been stated as the reason why water problem could not be neglected as one resident of Garki said: “it can lead to breakdown of water borne diseases in your house” (Garki06). According to a respondent from Phase II, because water is very essential for toilets and other domestic activities, “I do not think somebody can actually stay without water” (Utako07).

(b) Complete Neglect of Refuse Collection Problems: Unlike the case of water where there was absence of complete neglect, with regards to garbage collection, the opposite was
found. While thirty eight interviewees neglected, twenty two asserted that they have never or would never consider neglecting refuse collection problems, but did take action by reporting to authorities or hiring laborers to evacuate it. They said it is very unlikely that they would stay with garbage around their homes and that something has to be done because of health risks associated with neglect. They further cited problems of rodents and flies than can cause some diseases as their main concern if they were to neglect the problems or because of “the caliber of people living in the area” (Gwarimpa02) or “we are not animals; you have to take action; you cannot live like that with refuse as a human being” (Jabi02). The following quotes also corroborate this finding:

Now, we don't allow that to happen. If there is anything any problem with the issue of garbage it is a very serious case. If they do not pack it; you know the consequences it can pose a lot of problems (Wuse04).

If you don't think of taking action against refuse, I think you're not doing yourself good, because it is something that involves your health and you may be risking the health of your children, your own health and the entire neighborhood (Jabi04).

Conversely, in the 38 cases where households neglected the problems with garbage collection, they indicated that they did nothing by just ignoring the refuse without voicing or using quasi-exit. These households attested that they or their neighbors would just wait for the companies to come and pick up the garbage “whenever they so wish” (Asokoro04). Some of the reasons for complete neglect are that there are workers that are responsible to pick the solid waste or households don’t have any other option. Quite a few of these households indicated that they did not know where to take the garbage to or whom to complain to or they were more concerned about water and electricity as their scarcities, “were more disturbing” (LifeCamp01). Another reason that was given for complete neglect was that some residents do not care about garbage no matter how it would accumulate as the following quote exemplified:

When they do not come, we leave the refuse to heap there. You know Nigerian factor, nobody wants to do anything for government; let it be there for them. After all they are eating money in the office— that is what everybody assumes. So it would be there until when they are ready (Wuse03).
(c) Complete Neglect of Sanitation Problems: Similar to water there was no evidence whatsoever of complete neglect of sanitation problems inside interviewees’ homes but problems on the central sewer network were neglected by 10 respondents by not reporting and not attempting to fix the problem via quasi-exit as the city law prohibits households from doing that. When asked about a situation where respondents faced a problem with sanitation in their homes and decided not to take action, fifty one respondents said “no” or “never” that the problem must be addressed immediately without delay. Some households believed that neglecting blocked sewer or overflowing sewage means everywhere will be “messed up”, “terrible” or “stinking” (Asokoro05). An interviewee from Garki could not imagine a situation where by something goes wrong with his sanitation system and nobody takes any action because: “it would really be a bad health outcome; there may even be an epidemic” (Garki 02). One lady from Asokoro gave the following reason for not neglecting a broken sewer pipe in her neighborhood:

I will try to do something because it is dangerous not only the stench but what if my children are out playing or we are strolling and mistakenly have accident…mistakenly one’s leg can go in especially in the night’ (Asokoro04).

These respondents mentioned that they always take action either by reporting to AEPB, paying all outstanding debts or looking for alternatives by hiring artisans and plumbers to fix the problems for the health and safety of their families. One resident from Phase III said that he would not take any chances with sanitation problems but would immediately “springs into action and get it fixed” (Gwarimpa02). Other reasons for not affording to neglect sanitation problems are that sewage, unlike refuse, needs more attention because, “one must answer the call of nature” (Jabi04) or “unless an individual is prepared to die because sewage is a very dangerous liquid that can cause a lot of diseases like cholera and typhoid” (Wuse03). A lady from Garki illustrated the following as to why complete neglect of sanitation problems appears impossible:

You cannot stay with sewerage everywhere and say you will not take action. Is it possible? Even if you refused to take action because you do not have money or you don’t know what to do, you neighbors would they will disturb you because of the smell so you must do something. Even if you don’t want you will be forced to do something, because you are not living alone there (Garki03).
5.4.2 Partial Neglect: Lack of Voice

Neglecting public service agencies by not reporting problems because of hopelessness in getting the problems solved, distrust with the utility officials, feeling of cynicism, etc have also been found in this study. While 19 respondents did not report problems to water board, 22 and 13 decided not to complain to AEPB about garbage and sewer problems respectively. A male resident opined that with regard to the authorities in Abuja: “actually there is nothing one can do” (Gwarimpa04). Partial neglect of water problems received the highest count because the problems can be easily alleviated through storage/vendors or informal plumbers, while that of sanitation has the lowest value possibly because problems with sewer infrastructure cannot be easily fixed in the informal sector. Findings on the partial neglects are presented by type of services as follows.

(a) Partial Neglect of Water Supply Problems: Problems such as water outages were not reported by nineteen respondents but quasi-exit strategies of storing or buying water from vendors were often utilized. Similarly, other problems like poor water quality and low pressure were also partially neglected but mitigated through the use of alum/filters and storage respectively. Reasons for neglecting water outage were, “we used to it” (Asokoro01) or “it happens once in a while and it does not last long” (Garki07). Other respondents did not complain because water board always gives them notice about planned outage, so they store water or buy from vendors.

In term of water quality for instance, an interviewee from Wuse indicated that he learnt that there are not enough money for treating the water, so “I didn’t want to bother myself going there again to complain” (Wuse02) and one lady said that instead of complaining about water quality she treats the water with the chemical called “Water Guard”. The prior experience of unsuccessful voice that caused the partial neglect has been summarized by one resident who said that “there is nothing you can do in the city as far as the issue of water is concerned” (Utako04). Another partial neglect by respondents was deciding not to hook up with the city water and continued remaining with borehole as exemplified by this respondent from Phase II:

*Our house is not one of those connected. I think it is because of our landlord not because of the government. It cost money to get connected; so we used just the borehole….It is just my house that is not connected and that issue is because of*
the landlord, because some connection fees has to be paid to the government and maybe he think it is cheaper to continue with the borehole (Utako07).

(b) Partial Neglect of Refuse Collection Problems: Akin to water, problems of uncollected refuse and lack of bins were often not reported but alternatives of hiring informal refuse collectors and buying bins in the markets respectively are used as coping strategies. Twenty two residents described their experience of complaining about refuse collection as “unsuccessful” or “not encouraging” and therefore stopped reporting the problems to AEPB. A resident alleged that: “the refuse authorities here are bad” (Garki02) and another one said, “refuse collection in Abuja is very poor” (Jabi04). An interviewee declined to participate in collective voice organized with his neighbors because he believed that it is not worth it as there is no assurance that the agency would respond (Utako04). A resident of Durumi district refused to complain because she felt that, “there is nothing you can do to the management” (Durumi01).

(c) Partial Neglect of Sanitation Problems: While households can individually or collectively complaining to AEPB about sewer-related problems, 13 respondents neglected to report the problems because of reasons such as: “there is complete lack of confidence in the government providing the [sanitation] services” (Gwarimpa05) or “I did not address it [overflowing sewage]; I believe the maintenance department will see it and do something about it” (male, Asokoro02). Other reasons for neglect are that the location of the leakage “is not close to anybody's house” (Garki02) or “it is on the main express road so I did not do anything” (Asokoro03) or “it is not in my area, I don’t know what happened” (Garki07. Like the case of piped-water, another partial neglect found in this study is neglecting to connect to the public sewer network and continuing to remain with the septic system after the infrastructure has been developed in new neighborhoods.

5.5 Investment Dimension

This dimension of the EVLN strategies has not been reported in the literature. It is proposed to distinguish the strategies by their levels of efficacy and user contributions of resource (money and time) required to make the strategies more effective. This is especially for strategies employed to address problems with the delivery of essential services to their home or
This study found that eleven, six and fifteen respondents have invested their money for water supply, refuse collection and sanitation services respectively. The second was much less frequent because it is cheaper to collect garbage as such the utility agency does not need much of user investment in providing the services. Unreliable delivery of water and sanitation services received higher level of investment from users due to their necessity and inadequate state financing of capital-intensive infrastructure projects like repairing/maintaining or extending water/sewer network in the developing countries. In general compared to other constructive and active coping strategy of quasi-exit, investment was much less frequently utilized because it is much more expensive. The following section describes this kind of coping strategy for each of the services.

**(a) Investment for Water Supply:** Sixteen households individually or collectively put in their money to buy parts for fixing problems with public water facilities or even to extend the network to their residences. Some respondents bought main water pipes and other required materials so that water board reconnects an entire neighborhood to another water line or to replace rusted pipes. This effort is perhaps possible with monopoly and the essential nature of water. For example, a respondent from Phase I revealed how his household and neighbors agreed and contributed money, which they gave to Water Board to repair their main water pipes without which, “it could take forever” if they are to wait until the agency got budgetary allocation for the repairs (Asokoro04).

Similarly, a resident of Phase III stated that his household “came together” with three other families and contributed money to extend water supply to their homes. They sponsored the project whereby Water Board connected their individual houses with the main water distribution pipe (LifeCamp06). In another case, a respondent from a high density residential district in Phase I narrated how they invested their money to replace entire water pipes in their neighborhoods that became rusted:

We contributed money and pay up to a hundred thousand naira each household [$620]. They are long pipes and they removed them. It was like a little contract to them [Water Board]. Because if you don’t do that you would suffer nobody would answer you. So we did and they replaced the rusted steel pipes with the plastic ones. That is the one we are using now (Garki03).
(b) Investment for Refuse Collection: Eight respondents invested their resources to help AEPB in garbage collection. Some bought their waste containers or black plastic bag in the market when the state has not provided any or purchased extra bins when they are inadequate. Some respondents even contributed money to fuel the trucks that collect garbage from their neighborhoods. For example, a resident of Utako in Phase II revealed that in his apartment block they were allocated one refuse bin, but they later purchased another bigger one to make it two so that “when the other one filled up, we start putting the refuse into another so that the thing would not litter” (Utako03). The following quote is by a resident of Phase I about his experience of the way his neighbors used their money to purchase garbage bins that are supposed to be provided by the utility agency.

Some have gone to look for the bins in the market, because sooner or later the man who’s bin was not been carted away will start telling his neighbor whose bin is no longer there; please do not pour into my bin; it is not enough for my own refuse. Some people now purchased bins in the market (Garki02).

(c) Investment for Sanitation Services: Fifteen respondents invested their resources in providing sanitation services to their homes and neighborhoods. They mentioned that they contributed money so that AEPB would replace blocked and/or rusted sewer pipes in their homes or neighborhoods. According to an interviewee, when the sewer pipes in his neighborhood once blocked, the residents financed a project by AEPB that upgraded the sewer line: “before we were using 2 millimeter pipes so we increase it to bigger pipes so that even if something goes in it would not block” (Garki07). A similar incident was in Wuse district where a resident indicated that he and his neighbors collectively contributed over 200,000 Naira ($1,400) to buy sewer pipes required to replace the broken ones (Wuse02). In another high density residential district of Phase I, a respondent narrated how they invested their money that enabled AEPB to repair the sewer network servicing their neighborhood:

We had another problem with the chamber this year and we contributed money and it was environmental [that did the repair] and so far since it is not overflowing it was good and successful. Collectively we contributed money but somebody went there and contacted them on our behalf. We paid 20,000 [130] for each of the 15 flats (Garki04).
Investment dimension is proposed to categorize and measure EVLN strategies along the dimension of their varying efficacy levels and the resources required to be invested to make the strategies more effective for coping with unreliable services. It is successful in improving the efficacy of coping strategies. For example the respondents who invested in water supply agreed that it helped in improving the supply as the money they contributed was generally adequate to finance the infrastructure improvement projects. Also, it does not expose users to harm or health risks since the projects are undertaken by professionals from the utility agencies that observe safety standards. Similarly, Water Board has the required expertise to execute the projects, unlike the informal artisans. But investment could be very expensive for low-income households and less feasible by renters, which might explain its low utilization.

However, it is interesting to note that investment in refuse collection has been less utilized than the other two services. This finding is likely explained by the fact that the utility agency can collect garbage with little investments by the user since it is cheaper that providing water and sanitation services. Also, hiring of informal refuse collectors can substitute the need for investment. Investing for refuse collection appears successful in solving problem, it is cheaper, and it does not cause any health or safety harm or inconvenience to residents (just buying bins or fueling garbage pick-up trucks).

With regard to investment for sanitation services, residents were often not able to raise adequate funds to finance projects on the sewer system, being very capital-intensive networked service. Even when households were able to contribute the money, it usually takes time to be able to raise the required amount. The necessity nature of sanitation service and lack of quasi-exit alternatives for those households on sewer network (unlike water) is perhaps the main reason investing on sanitation recorded highest level of utilization. Similar to investment for water supply, investment on sanitation system is more likely utilized by homeowners. But, one of its pros is that the work is carried out by experts from AEPB as such it is not harmful to residents.
CHAPTER SIX
FACTORS INFLUENCING THE COPING STRATEGIES AND SEQUENCE IN CHOOSING THE STRATEGIES

6.0 Prologue

This chapter has two sections that present the study findings for research questions three and four. The first section is about research questions three, which discusses the factors that influence the choice and efficacy of the coping strategies. The second part talks about sequence in the use of the strategies by households in response to unsatisfactory services. For each question, its research proposition is restated followed by the findings.

6.1 Factors Affecting the Choice and Efficacy of Coping Strategies

Proposition for Question Three:

“Socioeconomic conditions such as income, political power and education of households and other factors do influence the choice and the efficacy of strategy used in response to unsatisfactory urban services provision in Abuja city”

Indeed households’ socio-economic conditions such as income, political power and education do influence the choice and efficacy of response strategies. But the findings of this research suggest that there are several other important influential factors. These factors, discussed below, are categorized under seven main headings: (a) nature of the services; (b) level of dissatisfaction; (c) cost of alternatives; (d) housing and neighborhood conditions; (e) socio-cultural factors; (f) inefficiency of the public sector; and (g) planning and regulations.

The three factors that respondents said matter most in influencing the choice or efficacy of response strategies are: cost of alternative (51); concerns for health hazards (48); and nature (necessity) of the services (43). On the other hand, the least influential factors were presenting gifts/tips (8), payment of utility bills, (8) social capital (9), employment type (11) and reporting approach (14) and monopoly provision of services (18). The first three factors were very
influential because they affect virtually every coping strategy. It is very surprising that housing affordability is not among the top three factors in this study. This could be explained by the fact that it only influences Tiebout–exit (residential relocation), though very strongly, but has no bearing on decision to voice, or to use quasi-exits, which are the most dominant coping strategies. Also, presenting gifts, social capital (knowing somebody that can help facilitate things), employment in the public sector and approach in reporting problems (whether face-to-face or writing letters or phone calls) mostly influence voice to make the staff of utility to be more responsive and they have little influence on dominant quasi-exit coping strategies like water storage and vending and the use of informal refuse collectors or plumbers/artisans. The details of the findings are presented in the following sections.

6.1.1 Nature of the Services

Piped water and sanitation and to some extent refuse collection are necessities of life and with the exception of refuse collection are services provided through a monopoly in Abuja. These two qualities affect the choice of strategies of 43 and 18 respondents respectively, as this section highlights.

(a) Necessity of the Services: This factor prevented forty three respondents from neglecting the problems of service delivery when they were asked if they could imagine a situation in which they would not have taken any action at all to deal with problems of water supply, sanitation or refuse collection problems. Water and sanitation are necessary services that residents found no alternative to going anywhere to get water during shortage and could not keep on with a non-functioning toilet at homes. For example, one resident said that he had to store water because: “without water life would be very difficult” (Wuse04). Because sanitation is an “essential utility product” when a respondent notified AEPB about a broken sewer, and the agency officials told him that there were no parts, he said that: “out of desperation, you have to go and buy the parts for the repairs” (Garki06). A lady in Utako also pointed out that water is a necessity, which makes neglect impossible, thus:

You cannot afford to stay without water. Water is life; there is virtually nothing you could do without having the ingredient of water. You cannot see water
problem and decide not to report or take action about it; that is even a threat to your existence (Utako02)

(b) Monopoly Provision: Eighteen respondents indicated that because the same utility agencies provide all the services throughout Abuja; Tiebout-exit is not of any benefit in coping with service dissatisfaction. When asked whether households would consider moving to another district because of problems with service delivery, they believed that there is not any part of Abuja that has constant water or without sanitation problems. One interviewee, for example, maintained that relocating: “will not likely make any difference” and another answered that: “even wherever you moved to, it is the same environmental that services all the areas” (Jabi04). Another opined that: “where you are moving to is it better than where you are staying? How are you sure about the place where you are moving to; is it not the same Abuja?” (Wuse03). The following quote from a lady in Garki districts illustrate the unlikelihood of moving as a coping strategy with refuse collection problems:

Is it refuse that will make me to move from my neighborhood to another? Moving away is like running away from the problem... because if you change environment, where you are going to, you will face the same situation there. (Garki04).

The monopoly provision of the services also affects voice. For instance, a respondent did not complain about the problem of sewer blockage because it is not only peculiar to his neighborhood but affected the city-wide network. Another resident of Utako decided not to voice about a problem of not having water meter because: “there is no need for that because the public utilities in Nigeria are a monopoly they do not have competitor so they do not care; they just do what they like” (Utako02).

6.1.2 Level of Dissatisfaction: Seriousness of the Problems

The severity of a problem, health hazards associated with it and the location of problems in relation to a household affects the choice and effectiveness of strategies utilized by 31, 48 and 36 respondents respectively as this section explicates.
(a) Magnitude and Severity of the Problems: The likelihood of applying quasi-exit, voice or neglect depends on the size of the problem and how long it lasts. According to about half (33) of the respondents, problems like uncollected refuse or leaking of water pipes are often considered not so serious to the extent of residential relocation because the problems are: “minor” or “not that serious” that they could easily fix or “survive with” by neglecting them. For instance, a respondent from Phase I remarked that: “people don't move that way. Is it refuse that will make me to move from my neighborhood to another?” (Garki04). A similar comment was from a resident of Wuse who rejected Tiebout-exit because: “it is not like the refuse is flooding the whole area and it is stinking that will take months to evacuate” (Wuse06).

But Tiebout-exit is possible among renters in the case of prolong water shortage or severe sanitation problems. For example, an interviewee from Phase II indicated the possibility of relocating to another district if “water shortage continues” (Utako03) and another said that: ‘I can only move when the sanitation problem last longer than necessary’ (Garki09). Storing water is only effective for short period of time, but prolong shortage renders it ineffective and the options of water vendors or fetching are usually taken. In areas where water shortage is not severe, the option of drilling borehole is found to be unlikely. Voice was also influenced by the magnitude of the problems as problems such as busted water pipes or toilet blockage are coped by quasi-exit but not voice as they are considered minor problems. A number of reasons for neglect as reported in the interviews were: “the problems are not constant” or “I don’t see it as anything that will worry me to take any action” (Garki07). This interviewee described how this factor affected his choice of coping strategies:

The decision to call either the private plumbers outside or complain to the water board depends on the severity of the problem. If it is not much, something minor that the commercial plumbers can handle, you don't need to go to water board; if you go to water board it will just be a waste of time for you (Utako02).

In terms of refuse collection, the size of refuse heap and how long it stays also determine whether to neglect it until the companies come to collect it or complain to AEPB or use quasi exit. For example, one resident said that he employed neglect when his garbage was not collected because “there was not much refuse anyway” (Utako02) and another hired some laborers to evacuate refuse that was left for three month because they were concerned about the
consequences of stench, rodents, etc (LifeCamp01). Similarly, a household could not tolerate the problems of overflowing sewer for days, so they had to organize with neighbors to contribute money and fixed the problems. A residence provided this reason for his neglect to voice:

I have not done anything at all since we are not much in the house; our refuse container does not fill up. So I do not have any cause to go and complain to them. So I wait until maybe after two weeks, then they come and collect it. I do not complain; I think those that should complain are those with huge refuse and they cannot manage it (Wuse02).

(b) Health Hazards: Forty eight respondents reported that health and safety issues associated with problems such as overflowing sewage, uncollected refuse and water scarcity compelled them to employ some coping strategies to deal with the problems. The options of fetching water from water bodies or purchasing water from Mairuwa and personal refuse collection have been rejected because of concern for the safety of such options. Fear of contacting diseases and stench are some of the reasons given for exercising voice or quasi-exit to fix problems with the sewer system rather than neglecting such problems. The following comment illustrates why problems with sanitation were rarely neglected:

When the sewage was blocked or something like that you would not even like to pass through that place because of bad odor. So we immediately inform the environmental people. …The environmental are the professionals that can handle the job that is why we did not consider any other approach than report the matter to them (Utako03)

Because of health threats from overflowing sewer, some renters hinted that they could consider moving to another houses. For example, a renter opined that if: “you cannot flush toilet, you have to leave the place” (Gwarimpa05). Another resident also gave this reason why he refused to neglect sanitation problems:

Supposing you flush and instead of the waste to go down it comes up… There may even be an epidemic, so I cannot imagine a situation where by something goes wrong with the system and nobody takes any action. It will really be a bad health outcome (Garki02).
(c) **Location of the Problems:** There is a regulation by FCDA that any problem affecting water or sewer facilities outside residences, on the central network, then only the utility agencies have the mandate to handle the problem. But if a problem is located inside a home, then the residents have the choice to either report it to the utility agencies or take care of it via quasi-exit as one responded pointed out:

*If it [a problem] is inside within the compound, it is our responsibility to look for plumber or call AEPB to come and work on it [sewer], but since it is outside the gate it is the responsibility AEPB to handle it and it is not close to my house so I did not address it. I believe the maintenance department would see it and do something about it* (Asokoro 03).

As such, thirty six interviewees mentioned that location of a problem in relation to their homes has affected their choices of coping strategy. Even among the problems that residents can address through quasi-exit, the likelihood of neglect depends on proximity of household to the source of the problems. Issues such as sewer blockage and spillage, leaking water pipes and mountain of garbage close to homes are usually solved via quasi-exit because households felt responsible or are directly affected by the consequences such as stench and health hazards that are higher with proximity to the problems. For instance, one respondent ignored an overflowing sewer manhole because it was not close to his house: “the typical attitude here is that it is none of your business, because it does not affect you directly” (Wuse01). Another interviewee hinted that if somebody invites him to organize and fix a utility problem, “not too far” from his house, he would be “more than ready to oblige and participate” (Garki 02). Similarly, a problem that is located close to a household, it is usually addressed through individual voice or quasi-exit by its residents but collectively if it is located where it affects the whole block or neighborhood as exemplified by the following narration:

*Yes there was a time when we have a leakage and nobody cares; nobody took any action that time because it was a central sewage system that is far from our houses but the only person that is more concerned is the person that stays in the ground floor the smell would be disturbing him. So he was the one that was going from house to house and be begging people and say this is the problem, please let us do this thing because it was affecting him. But most of the times those in the ground floor they normally make sure that these problems are addressed within short time* (Garki07).
Location of garbage also influences the choice of coping strategy with refuse collection because households are individually responsible for the bins allocated to their homes. If garbage has not been collected from a home, its occupants would contact AEPB or hire informal collectors but if it is located in centralized garbage bins, the response is usually collective voice, quasi-exit or even neglect. For instance, a lady from Phase I commented that because her neighborhood centralized refuse collection point is toward the extreme end of the street; not close to her house to be “disturbed by the pile of refuse” so she neglected it (Garki04). Also, a respondent from Phase II revealed that “if it [garbage] is close to our own house, we call one or two of those truck pushers to come and evacuate it” (Utako01). Similarly, households would most likely use their cars to dispose refuse that is located within their homes.

6.1.3 Costs of Alternatives

Cost is the major determinants of the choice of coping strategies and their efficacy as 51 respondents reported that it influenced their decisions about which strategies to employ as vividly depicted by one respondent thus: “I think people would like to opt for options that are cheaper, I know us Nigerians” (Jabi02). For quasi-exit strategies for instance, some respondents resort to the less-safe but cheaper option of local well than building a borehole, because the latter entails huge financial investment. According to one interviewee, “it is not everybody that has the means to have a borehole” (Utako06). The financial investment of borehole option is illustrated by an interviewee from Phases III:

*To sink boreholes you need between 600,000 to 700,000 and up to 1 million [$4-6,200] depending on the depth and soil texture and if you have constant supply of light or if you install a generator there will be no problem (Gwarimpa01)*.

In similar vein, quasi-exit strategies like hiring informal artisans to fix problems with sanitation or water pipes were considered more cost-effective, money and time wise, than complaining to the utility agencies. Even within similar strategy, water tankers are more expensive than the Mairuwass since in the first option the whole tank has to be purchased. One of
the reasons some residents build boreholes was to save money on buying water continuously for several years from vendors.

Cost of alternatives also affects the effectiveness of voice strategies. For voice to be successful, households often had to give some “tips” to the maintenance staff of the utility agencies, or transport them to user residences to do the repair. One respondent narrated that in order for AEPB to repair a sewer line in their neighborhood, the agency gave them a bill of some materials to purchase and carrying out the repairs depends on “how long it takes for you to pay the bills” (Asokoro01). Neglect is also influenced by cost when residents did nothing because they could not afford to pay for repairs or hire informal refuse collectors. For example, an interviewee from Jabi narrated that while garbage piled up in front of his home, he could not complained to the AEPB because: “I don't have money to buy the containers, which they proposed” (Jabi02). Similarly, for Tiebout exit to be effective households have to afford the high costs of relocation, which discourages this option in Abuja.

6.1.4 Housing and Neighborhood Conditions

Affordability of housing, type of tenure (homeownership versus renting), housing type (apartment or bungalow) and the quality of neighborhood have influenced the choice and efficacy of response strategies to dissatisfaction with service delivery according to 29, 30 and 27 respondents respectively. Details of the findings are as follows:

(a) Affordability of Housing: The concern of getting affordable housing overshadowed discontent with the services in deciding where to live in Abuja according to 29 interviewees. Housing appears the most important factor that prevents Tiebout-exit in the study area. When asked whether households have changed residence, would consider moving or know somebody who moved because of dissatisfaction with the provision of the basic services, all responses are in the negative except for three renters. Reasons include shortage of accommodation as public houses have been sold by government and the ones developed by realtors are expensive to buy or rent. For instance, one resident stressed that Tiebout-exit is very unlikely because: “people are more interested in cost; if the rent is right they will stay there, nobody is talking about refuse or sanitation” (Gwarimpa01). Other responses are: “we just can’t look for house today and get it
tomorrow” (Jabi04), or “one cannot move like that in Abuja because housing is not something to
easily come by now” (Wuse06). This quote illustrates this point:

You know why this thing [moving] will not happened in Abuja here is because
houses are generally scarce. Whether you like it or not, you have to stay. Because
where are the houses in the first place? People are even living in the outskirt of
the town and are suffering there. So there is no way you can leave your house
because you do not have water or refuse. You have to continue to bear with them
until they provided. In fact, you have no option of moving to anywhere (Garki06).

The costs of relocating to elitist districts in Phase I such as Maitama, Asokoro and Wuse
II where services are perceived to be better are high because of soaring property values. In
addition, most of the properties are privately owned, so problems with the services alone would
not compel homeowners to move to other districts. The following comments illustrate the
difficulties in buying or renting a house in Abuja that precludes Tiebout-exit:

Because rents are high here in Abuja, and when you’re going to a new premises,
you have to pay two years in advance; that is the practice here and you have to
pay the prevailing rate. Whereas if you stay where you are, you pay annually and
increment would not be so astronomical in terms of when you are living there, so
it cannot be more than 10-15% and not more than 20% increment, but when you
move to the new place, you have to pay the prevailing rate and sometimes it is
very high. That would prevent people from moving...To purchase [a home] you
have to find a place where it suits your budget and the houses are not uniform; as
you move from one district to another the costs change. It is not easy for you to
get the house exactly like your own that you can afford and you have to have a
buyer of your own to sell and then move to another that has similar estimate in
terms of cost and make. So it is difficult; it is not that easy (Garki08).

(b) Tenure and Type of Housing: Housing tenure also determines the kind of coping
strategies half (30) of the respondents employed. Tiebout-exit was less likely for homeowners
than renters who expressed the possibility of changing residence due to severe water and
sanitation problems. Similarly, homeownership allows households to sink boreholes, while those
in rental housing cannot do that on their own. For example, a tenant in Phase III wanted a
borehole in his home but his landlord could not agree with the idea (Gwarimpa04). Another
tenant said that the only reason that would make him consider changing residence is if he is able
to build his own house but not problems with the services (Asokoro05).
The choice of voice and quasi-exit is also affected by tenure status because tenancy arrangement of paying utility bills directly to the utility agencies or as part of the rent paid to landlords often determines whether it is tenant’s or the landlord’s responsibility to address service-related problems. According to a renter, “it is not my job; it is my landlord to deal with them and contacts them [utility agencies]” (Wuse03) and another lamented that his co-tenants do not care to participate in collective voice because: “they feel [since] they are tenants, so their landlord should take care” (Asokoro02). In terms of storage option too, a respondent illustrated how homeownership broadened his choices:

One can have the big surface or overhead tank especially now that the houses are owner-occupier. Because you now know it is your own house. It is not like one day you will be asked to leave the house (Wuse06).

Similarly, living in a block of apartments versus bungalows influences the choice and efficacy of the response strategies. For shared water/sewer connections or refuse bins, households living downstairs may be more disturbed by a broken sewer pipe or uncollected garbage and be forced to voice or organize to employ quasi-exit rather than neglect the problems. Likewise, low water pressure affects the households living upstairs more and they often have to come downstairs to fetch water or buy from vendors. For instance, a resident of Garki stated that since his house shares water and sewer connections with neighbors in a block of flats, it is always difficult to mobilize them to fix water and sanitation problem (Garki04). Burying and burning of refuse and drilling of borehole also need enough space and the options are unlikely feasible for residents living in apartment blocks even if they own their homes (Garki01).

Finally, households living in gated private or government-owned estates are often not allowed to build boreholes and the property owners do not allow Mairuwa or water tankers to enter such residential communities because of the arrangement the residents often have with the property owner to provide services or because of “security” concerns. For example, a resident of Sunny Ville estates in Durumi district and a lady who lives in National Hospital residential quarters lamented that since such communities are fenced and gated, quasi-exit was very difficult because the security at the gate did not allow Mairuwas or scavengers to enter.
(c) Neighborhood Quality: Due to phasing of infrastructure development and bureaucratic decisions infrastructure like roads, sewer and water have been fully developed in all of Phase I, but most of Phases II and III are lagging behind. Personal observation of physical condition of districts like Maitama, Asokoro and Wuse II in Phase I, Jabi in Phase II and life Camp in Phase III in terms of housing designs, low density development, quality of roads, landscaping and neatness, etc as well as interviews supported the perception that these districts are of higher quality because they receive preferential treatments by the state. As such, 27 respondents who considered their neighborhood as “better” said that relocation is unlikely or “more disturbing” because services are “better” in their neighborhoods than or “not as bad” as other areas and as exemplified below:

No, I didn't consider moving to another place because of the sewage. Because, as I said, I live in Phase I and Garki is more organized in terms of all the utilities than any other part of the city. Relocating to somewhere like Phases II or III it means you have to start digging your own septic tank as against the benefits of having to use the general system, which is available in Garki. I do not think that I would leave that place for any reason (Garki02).

Other reasons for not considering relocation from Phase I because of unsatisfactory services are: “I live in the first phase of the city, where 99% of the time there is running water in the taps. So which place do I know that is better”? (Garki02) and “many places they experience problems; all the Abuja outskirt, but the central area is much better” (Asokoro05). As such, moving to other districts, as one respondent said, “would not resolve the problems but might even aggravate them” (Wuse05). The comments below also buttress how neighborhood quality prevents Tiebout-exit:

No, where I stay is very comfortable and I don’t want to try that and I keep on thanking God for giving me this place. It is in a prime location, choice location. So moving to another district is not an option (Asokoro01)

I did not consider going to another part of the city …This is a residential area within the main city where it [design] is properly done and it is neat. It is only outside the city center where they do not have regular refuse collection, and it is not as effective as within the city (Wuse06)
Neighborhood quality also makes voice more effective but discourages quasi-exit. A resident of Wuse in Phase I described using the options of Mairuwa as “insult to us” and another said that they hired informal refuse collectors because the area where she stays is inhabited by “more civilized people, so you do not see trash lying around anyhow” (Wuse03). The utility agency officials also appear to respond to complaints from residents of Phase I quicker than those from other areas. For instance, while a resident of Garki in Phase I mentioned that garbage does not pile up in his quarter because of the area’s “strategic location” close to banks and filling stations (Garki01), a resident of Gwarimpa in Phase III indicated that even if she complains, since she lives in “isolated areas”, the utility agency “may not even promise you coming” (Gwarimpa04). A respondent from Phase III described how phasing affects fetching of water:

In Phase I that is where most of the infrastructure and facilities have been fully provided while we in the suburb we have to rely on the water that we fetch from there and take it home for our family to drink and do some other things. That's the kind of practice we were doing at that time (Gwarimpa02)

6.1.5 Socio-Cultural Factors

The level of households’ social relationship with neighbors, social capital (knowing somebody who can help facilitate things), educational and employment in the public sector, attitudes of neighbors and giving “gifts/tips” influence the choice and success or otherwise of response strategies as explained in details below.

(a) Degree of Neighborliness: For 28 respondents, cordial relationship among neighbors made collective voice, begging for water from neighbors and organizing to utilize quasi-exit strategies more effective and low neighborliness discouraged or prevented using the strategies. For instance, one respondent asserted that fetching water from his neighbor’s house was “quite all right”, because she maintained a good relationship with the neighbor (Wuse05), and another said that it is easier for him to get water from a neighbor because they are friendly and have “strong cooperation” (Wuse07). The following illustrates how high degree of neighborliness achieved a successful quasi-exit:
They got a pick-up and contribute and pay so that the trash can be taken away….what the houses do is they contribute money; they have a delegate that goes house-by-house and collect the money and pay up for that (Asokoro02)

Lack of cooperation among neighbors discourages employing some strategies. For instance, some residents of Gwarimpa neighborhood in Phase III could not came together and put money to repair their water pipes because “everybody shies away from responsibilities” (Gwarimpa03). Other reasons were lack of commitment by residents because they were busy or do not often stay in the neighborhood as exemplified here by a lady in Phase I, thus:

The way people live here is such that there are no collective efforts; individuals are living on their own, whatever happened in your flat they will not be concerned; it is mind your business, you don’t know what the other person is doing. Everybody is in his own flat; his own house so you don’t care. ... We hardly visit neighbors. There are some houses in Asokoro that only security people that are there; the owners are not even living in Nigeria (Asokoro04).

One interviewee from Phase II pointed out that collective complaint is difficult because he hardly meets his neighbors (Jabi03). This is probably because Abuja is a non-traditional city and heterogeneous, which reduces the ability for collective action. A few other reasons for lack of community bond were that some of the districts are residential areas are mixed with commercial activities or quite a number of houses were used as only guesthouses or they are vacant and waiting to be rented out (Wuse01). An interviewee noted that because mostly “rich men” live in Asokoro districts and in almost every house there is a borehole, neighbors do not care to come together to address the prolong water shortage affecting the neighborhood (Asokoro04).

(b) Network/Social Capital: Being or knowing an influential person in government played a vital role in making individual or collective voice more effective in the case of only 9 respondents. Some of them were proud to mention how their network of friends and relatives “helped” them in making their complaint successful. One respondent said that he has many links among the officials of AEPB and Water Board that he assisted even households in other neighborhood in fixing their service-related problem, as he said: “it is just a matter of taking my
phone and called them that there is a problem somewhere so that they can quickly go to it” (LifeCamp03).

During water shortages, according to a resident of Utako, one can go to the water board to “make the water quantity to be stronger” in his neighborhood (Utako04). Another respondent said that during water rationing “whenever I go home and there is no water and I need it, what I used to do is to call my friend at Abuja Water Board who would shut down supply of other neighborhoods and open the water for my area so that quickly store water” (Gudu02). One interviewee stated that he lives together with a former president of a university in an estate and if there is any problem with sanitation or refuse collection, the man would just pick a phone and call “whoever is responsible” and within short time the issue would be addressed (Kado01). The following quote further illustrate this point:

Most at times in this country is whom you know. So you may be lucky that you have a relation or friend that is working in that area [utility agency] so they may be able to take quick action. But as an individual if you don’t know anybody if you go there, nobody would listen to you (Garki07)

In Life Camp where the minister of the FCT resides, a respondent commented that: “here we are actually blessed because we have the minister staying here. So, normally our problems do not last because we have been blessed by being close to the minister that of course gives us some edge over other areas” (Lifecamp03). Eighteen respondents alleged that not unless the water board marketing manager knows the complainants personally or recognizes his voice or telephone number when they called him, then he will send their staffs to rectify the problem. A senior officer of the presidency admitted that his own situation with water shortage was quite different for it only requires making a phone call to Water Board office and water tanker would be send to his residence (Wuse05). This interviewee also highlighted the role of social capital in making voice more effective:

I don't know about other areas, where the people don't have government officials around and they may have to combine collectively and report. Because here there is a lot of staff of the FCT, so we do not have to form any union or group to be able to send the complaint forth. We are all part of the system and we are here living with them; if there are problems they get to know immediately (LifeCamp03)
(c) **Level of Education and Attitudes:** Similar to previous studies, education also influenced the choice and efficacy of response strategies. Twenty two respondents indicated that because they were aware of the importance of clean environment they rejected some certain strategies and/or did not neglect service-related problems. According to an interviewee, only those households who do not care about where they live and healthy environment would not complain about the problems (Asokoro02). Some residents reported that they have never utilized coping strategies such as fetching water from lakes and river water for bathing, washing and cooking, illegal dumping of garbage on open spaces or burning and emptying of sewage into water bodies because of the health and safety dangers associated with these options. Similarly, the attitude of not standing up to or questioning authorities affected the choice of voice as illustrated below by a lady from Asokoro:

> People don’t really get to complain when their refuse is overflowing here. All these things are what we hear they do in the western world where people know their rights. Here if they don’t come and pick it you wait until they come”

(Female, Garki Area I).

Another issue that featured in the study is the “I-don’t-care” attitude of some people with regards to public goods and services that do not affect them directly. For instance, a respondent preferred to voice individually, because in trying to get other people involved; it took very long time to fix a problem (Garki09). Some respondents cited this attitude as their reason for neglecting to inform utility agencies about problems as exemplified by the following quote:

> You know when a problem is not anybody’s problem, it is nobody's problem. You know our culture, nobody will take responsibility to go and report; because something public is bad; it is only when it affects you directly. For sometimes you may see the water oozing out from the pipes, but nobody cares for several months nobody would report (Garki06)

In similar vein, a few respondents complained about free-ride attitude of neighbors that hindered the efficacy of collective voice, especially in contributing time and money. For example, an interviewee from Phase I narrated that he faced “serious problem” of stench when some of his neighborhood didn't pay their share to fix a problem with sewer blockage (Garki07).
Another respondent asserted that in his neighborhood they have never voiced in a group, because everyone has his own individual style of doing things and since what affects one may not likely affect his neighbor, if they have a problem they “arrest it” individually on their own (Wuse04).

(d) Employment Type: There was also evidence that employment in the public sector negatively influence voice. Eleven households could not report problems because they are “government workers” probably for fear of victimization in their work places. For instance, a respondent from Phase III admitted that he is one of the “voiceless” when it comes to addressing water delivery problems because he is a government official (Gwarimpa02). Again, in Life Camp being a district that was specifically developed for the FCDA staff, a resident said that: “I don’t remember us taking any action because most of us here are government staff” (LifeCamp03). Also a lady in Wuse District could not get her neighbors to collectively voice about a problem with water connection in her apartment block as she explained here:

*I tried calling my neighbors so that we complain in group. But very few of them are interested because they said we cannot complaint against the government we serve. I said this is against our health but they refused to join me in support (Wuse02)*

Similarly, employees of security agencies, hospitals, educational institutions, etc were also restricted on the kinds of strategies they could use. Those provided with employer housing could not voice but often neglect problems in order to “protect” their employment. Complaining to the utility agencies rather than informing the employer seems to be inappropriate to those households living in such communities as one lady living in a hospital estate said that she could not “take hospital issues to AEPB” when she was having problems with her sewer system (Asokoro05). Some were often uncertain about who is responsible for the provision and maintenance of urban services—the employer or the utility agency. One lady who resides in one of these estates mentioned that she never voiced because she doesn't know whether the Federal Housing Authority is responsible in fixing problems with service delivery or the utility agencies (Gwarimpa03).

However, employment for the state favored voice as well in some cases. For example, an interviewee who is also a staff of AEPB said that he would not worry about sanitation problems
happening to him because he works with the organization, so fixing the problems would be easy
(Wuse02). One other advantage is getting free water during shortage, whereas employees of
other agencies or those in the informal sector do not have the “right to request water from water
board” (LifeCamp01). Another resident of the district gave this reason of why they do not need
to voice:

*I don't know about other areas, where the people don't have government officials
around and they may have to combine collectively and report. Because here there
is a lot of staff of the FCT, so we do not have to form any union or group to be
able to send the complaint forth. We are all part of the system and we are here
living with them. If there are problems they get to know immediately*
[LifeCamp03]

(e) Gifts and Tips: Presenting gifts to staff of the utility agency also plays a significant
role in making voice more effective and influences the decision of only 8 respondents to choose
between voice and quasi-exit. Apart from purchase of parts that officials of the utility agencies
asked residents to do, usually “drink money”, “mobilization fees” (Asokoro01) or
“fuel/transportation money” (Kado03) for repair jobs on the service that they are already paying
for. For example, an interviewee from Utako in Phase II narrated that there was a time they went
to AEPB office because of delay in garbage collection, but it was only after they made some
“moves [extra-legal effort]” that the refuse was evacuated (Utako01). Another resident attributed
the lack of success in complain to fix a problem with water supply in his apartment block to
“something else” that the officials were expected but did not get (Wuse07). According to another
resident of Utako: “you know how things are; sometime you have to part with some money to get
it done” (Utako04) and a lady from Garki shared her experience with AEPB personnel below:

*You have to go to environmental to let them know; then you mobilize them and
that mobilization is supposed to be off record. It is not official they don’t give you
receipt. It is for logistics; it can be may be 200 Naira up to 1,000 Naira, ($1.50 –
7.0) it depends (Garki03).*

These additional expenses discouraged some households from reporting but, instead,
hired artisans to fix the problems with service infrastructure because it is cheaper. It also appears
that sometime the residents themselves encourage this practice by giving gifts to the officials of
the agencies to shunt the order of schedule of repairs that is supposed to be first voiced, first served. Some residents admitted following the staff to other districts where they are supposed to work for someone and cajoled them to come and work in their homes. Similarly drivers of commercial water tankers and sewage disposal vehicles are often “bribed” by residents that are not on the queue to get the services prior to their turn. One Garki resident admitted here that, “to some extent sometime, we try to encourage the workers like: take little things for water. That encourages them, kind of support them and they will be happy” (Garki01) and another interviewee’s encounter with water board official was that: “he asks to give them some money to mobilize the staff; you give them some money for appreciating them for coming to do your job” (Garki04). Another lady shared her experiences with AEPB staff thus:

> You have to bring them to the house, you have to give them some little logistics and logistics in Nigeria means money. If you don't give them you would suffer it; nobody would answer you. We all know it happens, so we have to face the fact (Garki03).

### 6.1.6 Inefficiency in Public Service Delivery

This factor is what other studies referred to as the success or otherwise of prior voice, which is expected to affect the choice of the current strategy. However, there are several sub-factors that determine how successful previous complaints are within the context of Abuja that the author argues are a result of the inefficiency of service provision in the city and as such they demand separate consideration as reported in this section.

(a) **Reporting Approach:** Fourteen respondents agreed that their complaints were more effective because they were exercised collectively, especially through neighborhood associations because the utility agencies often do not give required attention to an individual. According to a respondent, the voice in a group is “bigger and stronger” than that of an individual (Jabi02). An interviewee from Garki, for example, stated that knowing that their residents association is a registered body that can “go to any length”; the utility agencies were “forced’ to attend to their complaints (Garki01). Another respondent from Garki who had a problem with billing that lingered for long time indicated that the problem was solved only after they went to Water
Board office in group as the officials who distribute water bills advised them (Garki05). This issue was also buttressed by this quote:

*The voice of many is of course always bigger and more important than the voice of one. So if you combine as a group and make your complains and of course you will see more action if you are in a group than an individual (Lifecamp03).*

With regards to the efficacy of mode of voice, interviewees acknowledged that it is more effective to visit the utility offices in person than to write or make phone calls. Some of the reasons given for inefficacy of telephone calls and writing letters are that if the agency officials do not know who is calling they may not respond or they may not even know the location of the problem so the complainants often have to transport or guide the workers. Another resident admitted that without several face-to-face complaints to the AEPB office, his sewer problem would not have been solved due to the “lackadaisical manner” of the agency staff (Utako01). The following comment also depicts how mode of reporting affected the efficacy of voice:

*Some people may prefer to put it on writing. But do you know why it will take long time? Because one person has to see it and it has to pass from one person to another before reaching the highest authority. But if you go there physically; you can even see the MD yourself and tell him the problem. It is more effective to go and complain verbally or physically than writing (male, Garki06).*

Similarly, complaints through media were found to make voice more effective. According to an interviewee, when the city becomes very dirty due to refuse heaps, people usually notify the media and that “brings back the Environmental [Protection Board] on its knees” (Utako02). Residents also carry buckets to the TV station during water shortage to make their voice stronger. Writing articles to newspapers also makes the utility agencies more responsive to the problems. There was a time when women and children staged demonstration in Life Camp where the minister of FCT resides by blocking the entrance to his house, the action that forced him to address their grievances.

**(b) Delay/Lack of Response and Shortage of Equipments:** Delay or lack of response to request for maintenance and shortage of equipments from the utility agencies resulted to change of approach from complaints to quasi-exit or neglect by 37 respondents. For instance, an
interviewee from Asokoro in Phase I stated that when complaint was not successful in solving a problem of sewer blockage, he “forget[s] about the government” and got a few “guys” that went into the manhole and fixed the problem (Asokoro01). Another respondent having waited for several days after voice “secured the services of masons and bricklayers” (Gwarimpa01). When faced with sewer spillage, some resident of Garki district intended to collectively voice, but knowing that it could take weeks instead of getting the job done within a day, so: “we decided to do it by ourselves” (Garki07). Also, a resident hired some scavengers to evacuate his refuse because, “if you report, it would take time before they do what they are supposed to do” (Asokoro04).

Other reasons why some residents preferred not to voice but employed quasi-exit or just neglected service-related problems were: “they never come” (Garki08), or “I will do it without contacting them because I don’t want them to waste my time” (Asokoro03). Similarly, a female respondent from Phase I neglected a problem of rusted water pipes in her home after several unsuccessful visits to Water Board office because: “I don’t want to bother myself going there again to complain; they may think that I complain too much” (Wuse02). The following comment is an experience of another lady with sanitation problem:

When you get a private and you pay him, he will do it up to your satisfaction. Unlike the government, which you don’t have control over them. They will say they are coming and you would not see them for another month and there is nothing you can do about it. You continue to follow them; wasting your time writing or going here and there; up and down begging them to come and do their work (Garki06)

Reason of equipment shortage also dissuaded some respondents from further complaining to AEPB or Water Board for repair works but rather used quasi-exit or neglected the problems. Households are often told to wait until when equipments are available to carry out the repair works. Lack of parts was due to bureaucracy and low budgetary allocation. For instance, an interviewee from Phase I and his neighbors were advised by AEPB officials to purchase parts required to repair a broken sewer pipe (Wuse02). Another resident of Utako in Phase II narrated the following experience they had with Water Board when they wanted to replace rusted pipes:
The problem is that there were no enough materials for them to work. So we had put some money together so that they can access such materials from the market. And they did that so quickly, because we realized that if we had to wait for the office to do it will take some time. So we decided to mobilize for the resources together to do it because we needed the water. If we are to wait for the government to put this thing in place, it might take some time, they will surely do it what is going to take time it involves some bureaucratic process, approval, procurement and all that (LifeCamp06).

Another resident of Phase I had to provide money to buy pipes to repair his water connection, otherwise he could have waited until “may be next year or two years” if he is to rely on the materials from water board store (Garki03). Accordingly, some respondents preferred to ignore the problems or hire informal sanitation workers or water plumbers to fix the problems than complain because it is faster, they have control of the repair as the utility officials are often accused of buying low quality cheaper materials. But with the private workers, households can purchase the materials themselves and determine the timing of the work.

(c) Prior Knowledge of Service Disruptions: Announcements in the local media about impending rationing of water or outages as a result of maintenance work or low water levels also affect the choice and efficacy of the coping strategies 26 residents decided to utilize. The quote below exemplifies how information about impending water shortage withholds voice:

They make the announcement over the radio that they are going to do some servicing of their machines or broken pipes that we should bear with them. So there is no need of complaining, because we are aware (Garki06).

Similarly, when such announcements were made, water storage strategy becomes more effective as against unannounced outage. Since water board usually announces the time and the duration of outages; it allows households to store adequate water that could last for that duration. In the same vein, the announcement facilitates fetching water by cars because it allows those households who use this option to know the areas that supply would not be disrupted.
6.1.7 City Planning and Regulations

This section discusses planning-related factors that affect the choice and efficacy of the response strategies: the modern city image of Abuja; phasing of infrastructure development; payment of bills as a condition for voice; and environmental regulations.

(a) Modern City Image: In trying to maintain the image of a modern city, FCDA does not permit building of boreholes in the first phase of the city and other districts where piped water has been provided. Local wells were completely prohibited in the city except in satellite settlements and Mairuwass and scavengers were “chased away” from Phase I and even arrested in the name of environmental cleanliness by the AEPB taskforce. Twelve respondents claimed to have been excluded from using these options during water shortage or refuse accumulation and have to resort options like using their cars. Because some households don’t follow these laws, five respondents admitted having local wells within their homes. For example a respondent from Wuse said though Mairuwass contribute in solving water shortage problem, the government banned them from operating in his neighborhood (Wuse03). In a personal communication with a staff of FCDA, the following reason was given as to why boreholes are banned in certain areas:

In the FCC that practice [borehole] is being discouraged, because we are suppose to have everything planned; the water supply is being planned, the sewage connections and disposal they are all planned. So we are not supposed to have all such haphazard provisions and solutions to these kinds of problems (AEPB staff)

(b) Payment of Bills as a Condition for Voice: Eight respondents who owed utility bills mentioned that they could not go to the agencies to complain but rather hired informal refuse collectors or plumbers to fix their utility problems. They acknowledged that they could not complain about the problems because, as one of them said, “you know when you’re guilty” of not paying the bills. Another resident said that, “most people do not pay, so they don’t complain” (Wuse02). The following reason is an example why this factor prevented a resident from complaining:

6 This evidence has been corroborated by local media report. See: www.dailytrust.com/
Because I was not paying my bills, that was a factor, so no boldness to go and report, because if you go to environmental they will say could we see your receipt at least as a good citizen that is coming to report problem. Show your receipts otherwise it may be the day you will enter their court (Garki04)

For those who are prompt in paying bills, they pointed out that when they faced problems with service delivery they were more confident to voice and demand for repair services since, as one resident of Phase II mentioned, “after all we have paid our bills’ (Utako03). One resident also said that, “now that we are paying for garbage collection, unlike before, we would definitely complain if it has not been collected. Another interviewee from Phase I went to AEPB to find out why garbage in his neighborhood was not picked recommended that, instead of sharing large bin, each individual household should be provided with a bin, so that any household that refused to pay, the collectors can leave his own garbage (Garki06). A group of residents in Utako who voiced to AEPB about sanitation problem were not listened to until they paid their outstanding bills (Utako06). The following is a quote on how nonpayment of bills prevented voice:

Most of us are at fault, we don't pay the environmental bills. I have my own; they brought it day before yesterday, 121,000 Naira ($750) and I have not been paying, so why do I need to go and complain. Sometime they will bring a sermon for you to attend their court but I have never bothered to attend. So I don't think I should go and complaint. Most people do not pay so they don't complaint (Wuse02)

(c) Environmental Regulations: Seventeen respondents indicated that existing regulations restricted them to the kinds of strategies they could choose. This is because of the regulation set that any problems affecting the central water or sewer network must be handled only by utility agencies. Households can only voice or neglect such problems but not use quasi-exit to hire private artisans to repair the problems because that amounts to a crime for tampering with government property and could lead to prosecution. The same regulation gives households the options of voice or quasi-exit to respond to problems located within their homes.

Another possible factor that facilitates the use of unsafe and unhygienic alternatives of refuse and sewer disposal by households in various districts is lack of enforcement of environmental regulations. Options such as emptying of sewage into drainage channels, disposal of refuse into water bodies, along road sides, on empty plots, and defecation on land are only
possible without enforcing the existing environmental regulations. A staff of FCDA admitted that even a few of the companies that collect refuse used to dump garbage on empty lands in the undeveloped districts of Phases III and IV.

6.2 Sequences in Choosing the Response Strategies

**Proposition for question four:**

“There is a sequence in the ways the coping strategies are employed by the households”.

This study found that the response strategies discussed in the previous chapter were not exercised arbitrarily but tend to follow certain sequences. Similarly, some sequences are more dominant than others and there are determinants of each of the sequences. These sequences are categorized, for easier analysis, into two: sequence of options taken within similar response strategies and those sequences taken between different strategies as follows:

6.2.1 Sequences Within Similar Strategies

This section looks at the sequence of options within a variety of exit strategies (Tiebout, provider and quasi) and then within the voice strategies (individual or collective).

**(a) Sequence within Exit Strategies:** In the case of problems with piped water supply, the possible coping strategies are: boreholes; water vendors; fetching from other places using cars/persons, or from rain/water bodies. All these are quasi-exit strategies because monopoly rules out provider exit and in the case of Tiebout-exit, there was no reported case of using that option and the few tenants who expressed their intention of employing it were explicit that it would be their last resort. As such, this section discusses the sequence of strategies within the quasi-exit.

- The first and dominant choice of a coping strategy during water shortage or in the areas that have not been connected to city water is the use of water storage (Figure 6.1). The major determinant of this pattern is the efficacy of storage option – cheap, less tedious and the source being the piped water available in most homes. In the case of water storage strategy becoming
ineffective when water shortage persists and the stored water is exhausted, then fetching water by cars or from neighbors became the second preferred choice as it is cheap. For example, a resident of Asokoro said that: “we use the reservoir, when it is finished they [children] come downstairs and will always get the water” (Asokoro05). Another second option after storage (2a) is buying from vendors and then the options of fetching were considered third in the sequence; employed only when water vendors (second option) were not available as an interviewee narrated that: “when there was shortage of water because of maintenance and I ran out of storage, and I didn’t see the hawkers, I occasionally that is once or twice I used my car” (Garki08). Water vendors option has also been the last option (option 3a) when stored water is exhausted and fetching water from neighbors (option 2a) have been restricted to few trips or not allowed at all or it is on weekends and fetching by car from public buildings is impossible.

Figure 6.1: Sequence of coping strategies with water shortage beginning with storage

- Whereas, in another sequence in Figure 6.2, the first and dominant option during water scarcity is the borehole for those who have it and because it is usually attached to storage facilities, in the event of its failure, the second choice is to use the stored water (option 2). The determinants of this sequence is having control over the water supply (steady supply) and quality being better than that of vendors and possibly long–term savings compared to continuously buying water from vendors. Whereas households who use local wells do not usually store the water but draw some as the needs arise. When the stored water is finished then the third option is either to purchase water from vendors (option 3) or fetch from public buildings or neighbors (option 3a). The choice between options 3 or 3a depends on cost and convenience.
In another rare sequence in Figure 6.3, the storage option is not utilized as the first option due to reasons such as unannounced outage or as one resident of Jabi mentioned that he was busy and was not at home to store water. In such cases residents use their cars to fetch water from another district or send their children to fetch from neighbors as the first option. Those are likely households who have access to public buildings in Phase I where there is steady water supply or neighbors that would allow them to fetch water. Another determinant of this sequence that begins with fetching water rather than buying from vendors in the absence of storage is that the water is more or less free and the source of water is known. These households also store the water they fetched as the second option. For example, an interviewee from Life Camp district in Phase III narrated the following as his sequence of choices in dealing with water shortage:

*When the problem happened and it catches you by surprise because you were not expecting it, you buy water from the local sellers or you use your car and go to areas where there is water and fetch* (LifeCamp03)
Other households would prefer to buy water from vendors as the first option (1a in when Figure 6.3). Some of the reasons were that they don’t have children to help them fetch water, or it is on weekends; offices were closed or they live far away from the central area where water is usually fetched from public buildings or because they work in the informal sector and thus don’t have access to the public buildings. However, when water shortage persisted, some of these households switched from buying water from vendors to fetching as the second option (2a) either because buying water from vendors was becoming unaffordable and therefore unsustainable or because the vendors were not available during high demand.

There is also another sequence (Figure 6.4) for coping with during water shortage where some respondents relied on fetching or vendors as the first option. But later they built a borehole as the next choice (second) because, “in the long run, it is more economical than the option of vendors”. People that own borehole typically started with this sequence. According to a lady from Asokoro, her household started with buying water from vendors but after “consultations”, her family thought that it is better to dig a borehole and they did (Asokoro03).

![Figure 6.4: Sequence of coping strategies with water shortage beginning with vendors](image)

Similarly, another interviewee from Wuse district cited the following as how people switch from water vending to borehole strategies: “in the early stages of shortage, you can use the vendors and when you realize that buying water from vendors, cannot be sustainable and the borehole is just the best option” (Wuse01). But when the borehole malfunctions due to power failure or mechanical faults, water vending (option 3) or fetching (option 3a) becomes the next coping strategies as experienced in the narration below:
If the borehole is not working, we will buy from the vendors. While we are buying we make an arrangement to repair the borehole make sure it is functioning. We switch from one to another depending on the situation (Jabi02)

- **Sequence of coping with refuse collection**: The possible exit strategies are quasi-exit or provider-exit because there are multiple private companies that are engaged in collection and there was no evidence of Tiebout-exit due to garbage collection problems. Hence, the first and most common option is personal disposal of refuse via burning/burying or using cars/children or house servants because it is cheap (option 1, Figure 6.5). Another first option (option 1a) was to hire informal refuse collectors. The choice of whether to use options 1 or 1a first also depends on the size of garbage, the bin is shared or not and the availability of children/house servants or cars to dispose garbage. Few households who hired informal collectors to cope with the failure of the government designated collection company, decided to exit the partnership, chose a different company and dealt with it directly (provider-exit) as the next option (2a). Some respondents whose first choice of coping with refuse problem was self collection (option 1, Figure 6.5), they later hired informal refuse collectors as the second option (option 2) when the problem persisted and the garbage became too much or as narrated by a respondent from Phase III:

*We started with putting all these waste in your car, and then some of us consider that it cannot be done forever. So why can't we engage the services of private waste collectors and then levy ourselves to pay them and we did (Gwarimpa02)*

![Diagram of refuse collection strategies](image)

**Figure 6.5: Sequences of coping strategies with refuse collection problems**

(b) **Sequence within Voice Strategies**: There are only two choices within the voice strategies: collective voice (complaining to service provider in group or meeting to discuss
problems and to find solutions); or households individually complaining to the service agencies. This section discusses sequences of voice strategies beginning with each of the two choices:

(i) **Sequence of Individual then Collective Voice**: Some respondents started first with individually complaining and then later when it is ineffective in solving the problems they invited neighbors to collectively find ways of addressing the problems (Figure 6.6, options 1-2). This is the most dominant sequence as almost all collective voices begin with individual. This sequence usually happens in a block of apartments and where water/sewer connections and/or bills are shared and the dominant theme that emerged for collective voice is that it normally started with an individual effort. For example, an interviewee from Asokoro indicated that when there was a problem with sewer blockage in their apartment block, he complained to AEPB alone but when there was no immediate response, he notified his cotenants and they organized and went in group to the utility agency office (Asokoro04). Other instances of responding with individual before collective voices were when water shortage or sewer spillage problems occurred and for few days residents were individually complaining to the utility agencies. But when the problems persisted without success of individual voice, then households would start talking about it and later collectively complain to the agencies.

![Figure 6.6: Sequence of individual and collective voice strategies](image)

(ii) **Sequence of Collective then Individual Voice**: In opposite and rare situation, some households started with collective voice first, then when it is unsuccessful then they complained individually (Figure 6.6, options 1a-2a). Due to attitude of some people in not having interest in cooperating with their neighbors, collective voice was often unsuccessful and residents later
decided to voice individually without waiting for others. For example, a lady who started by trying organizing with her neighbors to complain about piped water that was mixing with sewer in her apartment block could not get their support, so she ended up voicing on her own. In another instance, a resident of Sunny Ville Estate in Phase III first tried organizing with her neighbors to address a problem with sanitation but “it did not work” so her family had to: “handle it individually” (Durumi01). Another respondent pointed out that if he is to face sewer problem in his neighborhood: “I will organize with people if I don’t see better response I will decide to do it on my own” (Asokoro03).

(iii) Sequences of Vertical Voices: Another sequence that this study finds and has rarely been referred to in the literature is the vertical voice (Figure 6.7). This is the dominant sequence for residents of housing projects provided by employers like private companies and government agencies like security establishments, hospitals, schools, corporations etc and other gated communities or estates. The sequence is not to complain to the utility agencies first but inform the maintenance department (option 1), then the management of these agencies (employer) as the second option, and then if that is unsuccessful in addressing the problems, then households could individual or collective voice to utility agencies as the third option. Sometimes the sequence terminates at neglect or quasi-exit after reporting to the employer but never reporting to the public utility agencies. The major determinants of this sequence appear to be the fear of annoying the employer or losing one’s jobs as well as the hierarchical structure of authority in some establishments like security agencies that provide housing for their employees. For example, a resident of one of those housing estate in Phase I explained that: “you write to maintenance before going to Abuja EPB [Environmental Protection Board]” (Asokoro05).
As mentioned in the previous chapter, several tenancy arrangements are that utility bills are part of the rent. In such cases, tenants usually complain among themselves about service problems (Figure 6.7, option 1a), then report the matter to the landlord or his agent (option 2b) before reporting to the utility agencies (option 3a). This appears to be the dominant sequence among the renters. One tenant who followed this sequence explained that: “I will first report to my landlord who would take care of that [refuse collection problem]. Except if he did not do it; I will go [to the utility agency office] by myself” (Garki09).

In few instances, complaints to refuse collectors or the official that distribute water bills were often the first sequence in voice and when the problems were not addressed through these channels, then households would complain to the agency. If that option is not successful, another hierarchy is voicing to the director of water board or AEPB by those with access to him/her.

Among the modes of voice strategies, one sequence was calling the utility agency by phone first and then going there in person if the call is successful in getting the problem addressed. According to a resident of Wuse, “if you cannot get to them by phone then the next thing to do is to go there in person and lay your complaints and see how promptly you would be attended to” (Wuse05). Similarly, when individual or collective voices by phone or personal complaint have failed to address water shortage problem as the first option, residence carried buckets to the local TV station as the next hierarchy of voice strategy. However, this is a rare sequence that this study found.

6.2.2 Sequences Between Different Strategies

This section looks at the various sequences of choices between quasi-exit, voice, and neglect strategies. It explains how households start with one strategy and then move to entirely different one later. The major sequences found in this study are highlighted below:

(a) Voice and Quasi-exit Sequences: Do households start with voice before they exercise quasi-exit, do they do the opposite, or both? For some kind of problems that require maintenance, one sequence is to complain to the agencies first (Figure 6.8, option 1a) and then when it is unsuccessful in getting the problem solved then quasi-exit strategies are used (option
The major causes of this sequence are the inefficiency of the public sector (delay or complete lack of response), requirement to provide some “tips” to the staff of the agency or lack of spare parts to do the repairs. For example, an interviewee first complained about refuse heap and because AEPB, “did not do their job” he then called informal refuse collectors who evacuated the garbage (Asokoro03). An incident of sewer blockage occurred in a block of apartments in Wuse district and after an unsuccessful attempt to get the AEPB come and fix the problem, the residents opted for quasi-exit as narrated by one of them: “by the evening we have to change our tactics and decided to have a private firm. It was a blockage, probably a diaper or something that cause it” (Wuse07). Similarly, when asked about how likely a household would address water supply problems like pipe burst, a resident of Garki district in Phase I responded:

Of course that [using informal plumbers] would not be my first option, because I know there is authority that is supposed to take care of that except if they are not doing anything; that could come as a second option (Garki09)

![Figure 6.8: Sequence of voice and exit strategies](image)

There were few instances, however, where respondents first tried hired informal artisans to fix problems with their sewer or water connections (Figure 6.8, option 1) and then when the approach was unsuccessful in solving the problems they resorted to informing the utility agencies (option 2). A reason for this sequence is consistent with the concern about the competency of the artisans especially for repairs that require high technical know-how. For example, a respondent from Phase II narrated an incidence where he hired a plumber to fix a problem of sewer leakage but when that option “failed” then he complained to AEPB (Jabi04).
(b) **Voice and Neglect Sequences:** Neglect and voice were also employed interchangeably in different sequences (Figure 6.9). Some household would prefer to neglect a problem first, (option 1) and this is the dominant theme for problems that respondents considered minor such as brief water outage or pile of uncollected refuse. Similarly, neglect was initially used in some cases of broken main water or sewer lines on the street. But when the problems persisted – water outage lingered or garbage started piling or stench from broken sewer line became unbearable – then the strategy changed from neglect to households talking to each other before complaining to the utility agencies (option 2). The third option is when complaining to the agencies was ineffective, then residents hired informal refuse collectors or artisans to dispose the garbage or repair the sewer line as the third option.

![Figure 6.9: Sequence of voice and neglect strategies](image)

- There was also a sequence where some respondents complained first (Figure 6.9, option 1a). Then when the voice was unsuccessful, then it was followed by neglect (option 2b). Magnitude and location of the problems in relation to households are the major determinants of this sequence. There were incidences when respondents initially informed AEPB about delays in refuse collection but when the collectors did not come to collect the garbage they neglected it. Similar situations also happened with busted water pipes, blocked sewer or sewage spillage on the main network where interviewees admitted complaining to the AEPB but later neglected the problems because of the city regulation that forbids tampering with the centralized water/sewer network. A respondent indicated that when his voice was unsuccessful to address a problem of non-collection of refuse as the first response strategy, he decided to stop paying the annual sanitation and refuse collection fees thus: “if I cannot be given service and of course I will not pay” (Wuse05).
(c) **Neglect and Quasi-exit Sequences:** As shown in Figure 6.10, problems that some interviewees regarded as minor like broken water pipe, uncollected garbage were often neglected initially (option 1) for some time. But when the problems persisted, quasi-exit strategies were often deployed to address the problems (option 2) without reporting to the utility agencies. This is the dominant sequence between neglect and quasi-exit. For example, an interviewee from Phase III stated that there was a time refuse accumulated in his neighborhood central collection point and they neglected it in the beginning but after three month they could not bear with it and they had to hire laborers to evacuate it (LifeCamp01).

![Figure 6.10: Sequence of neglect and exit strategies](image)

There were also few cases of neglect accompanying quasi-exit strategies (Figure 6.10, options 1a - 2a). Some households volunteered to hire informal artisans on their own to fix a problem with services they shared with neighbors (options 1a). But when the effort was not reciprocated or appreciated, future occurrences of the problems were often responded with neglect (options 2a). Free riding on households by neighbors who refused to contribute their share of money and time in fixing problems was found to be the main reason for this sequence. For example, a respondent paid informal collectors for disposing garbage from shared bins in her apartment block and a lady in Garki who began with quasi-exit to address sewer blockage in her apartment block later changed to neglect because neighbors were free riding on them, thus:

*The first time it [sewer blockage] happened I did not contact anybody and nobody pays me anything. The second time nobody did anything I did it and the third time, I just allowed it. Because people just have this care-free attitude. Despite the fact that the place was smelling, I left it (Garki04)*
CHAPTER SEVEN
CONCLUSIONS AND IMPLICATIONS

7.0 Chapter Overview

This research differs significantly from previous studies, which are mostly conducted in the developed world within the context of competitive market economies. Their methods also typically involved surveys where simplified findings are usually presented thereby missing the complexity of the issues. Accordingly, the conclusion here intends to place the study findings within the body of literature on EVLN model of user response to unsatisfactory urban services and theories of urban service delivery by underlining where the findings differ or corroborate prior studies. The conclusions together with the implications section present the contributions of this study in these two fields as well as in the provision of basic public services in the developing countries.

7.1 Conclusions about Households’ Coping Strategies and their Efficacy

This study concludes that, while several coping strategies with unsatisfactory urban services supported the EVLN model, strategies utilized in Abuja contain some important variations from the ways they have been depicted in the literature. The strategies have been utilized at different frequencies, which is measured based on the number of interviewees that use a particular strategy. This study is also the first attempt to evaluate the efficacy of the EVLN strategies and their efficacy levels are measured based on author’s subjective evaluation, which compares the pros and cons of each (refer to the criteria at the end of chapter three). The discussion placed the study findings within the context of prior studies as this section highlights.

7.1.1 Conclusions about Exit Strategies

Starting with Tiebout-exit that involves changing residence because of unsatisfactory services, this study found no evidence of homeowners employing this strategy for any of the services. For renters, only one moved and 5 and 7 expressed intention to move when water shortage and sanitation problems respectively become severe. And since exit strategy is a kind of
destructive strategy that is not meant to improve the situation but to flee from it, in Table 7.1 its efficacy level is not applicable and even if it is a constructive response because there were only few cases of intention to utilize it, its efficacy level would not be known. This finding of non-utilization of Tiebout-exit supports a similar study on coping with unreliable water supply in Delhi, India where only 1.5% of respondents have moved or intended to change residence as a result of water problems.

Despite that monopoly makes provider-exit impossible for water and sanitation, the strategy was utilized for changing designated refuse collection companies, though expensive because the subsidy that comes with the partnership is forfeited. This provider-exit was highly effective in improving the performance of garbage collectors although only 6 cases of that option are reported in this study. This echoes the merit of competition in privatization for maintaining a minimum quality of refuse collection services (Ahmed and Ali, 2004; Thoenen, 2007; Roth, 1987). Another provider-exit was the case of 3 interviewees who decided to remain with the septic system after their neighborhoods have been connected to the central sewer system. The septic system is a highly effective coping strategy because households do not pay sewer bills and can fix associated problems faster as they have full control over it. Further, the system is designated as an improved means of sanitation (WHO, 2012), but when a septic tank is full, disposal could be expensive or detrimental to human and environment when done improperly.

Other alternative private services are the informal maintenance or repair of water and sanitation facilities, which has been utilized by 37 respondents. The efficacy of these services is assessed as moderate because of their success in fixing problems on time and relatively moderate charges. But there is concern for criminality, lack of expertise of the artisans and hazards associated with the approach as these workers usually do not wear protective gears.

<table>
<thead>
<tr>
<th>Exit Strategy</th>
<th>Efficacy level</th>
<th>Utilization</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Water</td>
<td>Refuse</td>
</tr>
<tr>
<td>(a) Tiebout-exit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. Owners</td>
<td>NA</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>ii. Renters</td>
<td>NA</td>
<td>1*</td>
<td>0</td>
</tr>
<tr>
<td>(b) Provider-exit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. Refuse collection company</td>
<td>Moderate</td>
<td>NA</td>
<td>6</td>
</tr>
<tr>
<td>ii. Informal maintenance services</td>
<td>Moderate</td>
<td>37</td>
<td>NA</td>
</tr>
</tbody>
</table>

Note: NA = Not applicable, * 5 and 7 renters expressed their intention to relocate due to severe water shortage and sanitation problems respectively
Next are the quasi-exit strategies that refer to temporarily devising alternative services to cope with unsatisfactory supply and are found to be the most dominant of all the strategies similar to other cities of developing countries. However, their efficacy levels differ by each option as shown in Table 7.2. These strategies are realities of urban living we have to contend with as networked infrastructure such as water and sewer are capital intensive projects whose provision to rapidly growing population is very challenging. Unfortunately these strategies have been under-reported by the EVLN studies and quasi-exit as a separate form of response strategy is yet to be recognized by the major scholars of the EVLN model about a decade after it was coined. Possible reason is that these strategies are rare in the developed countries where most of the EVLN studies concentrated and few studies are done in the Third World.

Starting with quasi-exit for water supply, water storage appears to be the most utilized (54 responses) and most effective strategy because it is free, its water source is known and safe as piped water is mostly used. But not all household have access to piped water to store, coupled with the inconveniences associated with storing and possible contamination during storage. Borehole seems to be the second most effective coping strategies with water shortage because of the safety of its water as classified by WHO (2012) and its reliability by providing a kind of autonomy from the public supply. But many household cannot afford it coupled with the fact that it is not allowed in some parts of Phase I.

Similar to Abuja where 54 interviewed households store water and 19 built boreholes, in a study on households’ coping strategies with unreliable water supply in Delhi, India, 63.1% of surveyed households store water and 16.5% drill boreholes (Zerah, 2000). For water vending, its efficacy as a coping strategy is low though it is the second-highest utilized option (48 responses). This is because it can be expensive and being unsafe water source for drinking. These findings are in tune with the similar studies in developing countries. For instance, in Lagos 40% of respondents in a survey who are dissatisfied with piped water used quasi exit by drilling borehole and buying water from vendors (Acey, 2008), while in west and north Jakarta 55.9% of respondents sourced water for drinking and cooking from vendors (Crane & Daniere, 1996).

Cases of using tankers were only 15, probably because of the requirement of buying water in large quantity. Its efficacy as an alternative is scored low since it is expensive, not readily available and has been classified as unimproved water source (WHO, 2004). Using
personal cars to fetch water is rarely reported in literature but utilized by 28 respondents. What made this option possible is perhaps the observed high rate of car ownership observed in Abuja; being a mainly administrative city where residents have access to Phase I as their place of work and they can easily fetch water after closing from work. Fetching water by children/women from public taps and neighbors has been utilized by 20 respondents and its efficacy in solving water shortage problems appears moderate as it is free, the water source is safe (borehole or tap) but inconvenient and children were sometime unsuccessful in getting water. Low utilization of this strategy in Abuja compared to other like storage or vendors corroborates other studies in developing countries. For example, a study in Jakarta found that only 13.1 % of households obtained water from their neighbors (Crane & Daniere, 1996). Employing this option is encouraged probably by the patriarchal culture in Africa where women and children carry water when it is not available in the home (Matiza, 1994; Thompson et al., 2001).

While 16.4 % of surveyed households in Bangkok obtain their drinking and cooking water from river/rain (Crane & Daniere, 1996), none of the interviewees did so but six knew others who have utilized this strategy in Abuja and at national level about 5% of urban dwellers source their drinking water from surface water sources as of 2010 (WHO, 2012). Likely explanation for low utilization of this option is that the few water bodies around Abuja are not close to residents. The efficacy of this option is low because the water source is unimproved and it is tedious to carry water. Though rainy season lasts for about seven month in Abuja, collecting rainwater for residents of apartments is difficult and the water can be contaminated during collection. Accordingly, its efficacy is moderate as an alternative source of water because of its being free and improved source of water as designated by the WHO.
### Table 7.2: Efficacy and utilization of Quasi-exit strategies

<table>
<thead>
<tr>
<th>Quasi-exit Strategy</th>
<th>Efficacy level</th>
<th>Utilization</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Water supply</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Drilling a borehole</td>
<td>Moderate</td>
<td>19 (5 local wells)</td>
</tr>
<tr>
<td>(b) Water vending</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. Mairuwa: pushcart vendors</td>
<td>Low</td>
<td>48</td>
</tr>
<tr>
<td>ii. Water tankers</td>
<td>Low</td>
<td>15</td>
</tr>
<tr>
<td>(c) Water storage</td>
<td>High</td>
<td>54</td>
</tr>
<tr>
<td>(d) fetching water:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. from public taps and neighbors;</td>
<td>Moderate</td>
<td>36</td>
</tr>
<tr>
<td>ii. using cars;</td>
<td>Moderate</td>
<td>28</td>
</tr>
<tr>
<td>iii. from surface water bodies;</td>
<td>Low</td>
<td>6 (knew others)</td>
</tr>
<tr>
<td>iv. from rain</td>
<td>Moderate</td>
<td>7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Refuse collection</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Informal refuse collectors</td>
<td>Moderate</td>
<td>18</td>
</tr>
<tr>
<td>(b) Personal refuse disposal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. by children and house servants</td>
<td>Low</td>
<td>6</td>
</tr>
<tr>
<td>ii. inside car trunks</td>
<td>Moderate</td>
<td>5</td>
</tr>
<tr>
<td>(c) Burning and burying of refuse</td>
<td>Low</td>
<td>2</td>
</tr>
</tbody>
</table>

| Septic Sanitation System     | High           | 21          |

Quasi-exit strategies are employed for refuse collection in three ways. In the event of refuse not being collected, households hire informal refuse collectors or personally dispose their refuse or burn/bury it. Despite the partnership where private companies collect refuse, 27 respondents used informal refuse collectors. As shown in Figure 7.2 above, its efficacy has been evaluated as moderate because households believe that it is a successful way of getting rid of refuse and charges are moderate. But the informal refuse collectors often dump refuse improperly into water bodies or on vacant land and uncompleted buildings thereby polluting the environment and thus exposing the community to health threats, plus they do not wear protective gears for safety. Though some tippers dispose refuse to designated dump sites, the option is rare.

Comparing its pros and cons, the efficacy of refuse disposal in person is evaluated as low because dumping of refuse through this approach is dangerous to health coupled with the inconveniences of sending children or using cars to dispose refuse. Its utilization also appears to be low as only nine cases of using children and cars to dispose garbage were reported. It is not to say that all cases of refuse disposal by these two approaches are improper, there are few cases...
of dumping refuse at neighborhood commercial centers that have bigger bins but it is done without the permission of the commercial centers.

Cases of burning and burying of refuse were negligible (3 and 1 respectively) possibly because most refuse composition in the developing countries are organic matter that can’t be burned and burying requires adequate space and it is near impossible for apartment dwellers. The efficacy of both options for coping with refuse collection problems are considered low because of pollution risk of fire associated with refuse burning, the inconvenience of digging a ditch for refuse burial and environmental pollution.

In conclusion, these alternative coping strategies place severe cost burden on households. Women and children also bear a huge share of the inconveniences through fetching water from neighbors and public buildings or to disposing refuse because water is heavy and the children have to carry water kegs or refuse containers on their heads, often to or from upstairs. This finding corroborates a recent data that 62% of those that fetch water in sub-Saharan Africa are women and 15% are children who spend an average of about 30 minutes for a round-trip to collect water (WHO, 2012, p. 31). This burden affects children’s education as they skip school or do not have adequate time to revise their studies after school. This concern has also been highlighted by UN that in developing countries girl children are frequently kept out of school to ensure that the household water needs are met (UN-HABITAT, 2003).

Likewise, relying on water vendors is more costly than the public sector piped water. Thus, the residents of neighborhoods in Phase II and III where water supply is unreliable or are yet to be connected with city water that are mostly low-income and junior employees have to spend more from their meager income for water than those on the public system in Phase I that are typically wealthy. For example, while households linked with public water system were charged a flat rate of 4,000 Naira ($26) monthly and during water rationing senior government employees do request water from water board to be delivered free to their residences, those not connected purchase a tank of 1,000 liters for 3,000 Naira ($200) or a 20-liter can from local vendor for $0.20-0.35. Similarly, these households also have to expensively pay commercial refuse collectors and the private companies that empty the underground sanitation tanks or informal artisans to repair or maintain the service infrastructure owned by the public sector.
7.1.2 Conclusions about Voice Strategies

Voice in its many forms provides corrective feedback that can help to get faltering institutions back on track. In this study, collective complaints through formal residents’ associations are highly effective in solving service-related problems (see Table 7.3) since the associations have the required skills and resources to inform higher authorities or even take legal action. However, these associations were mostly found in private gated communities and housing estates for senior public/private employee hence only in three cases these associations reported water problems possibly because they have the resources to build community boreholes or big overhead tanks that supply the whole property. Similarly, only two respondents indicated that they complained to AEPB about refuse collection through the associations perhaps because these neighborhoods hardly have problems with refuse evacuation as they can easily hire informal collectors so they do not need to complain to the utility agencies often. Whereas for sanitation, eleven respondents pointed out that their neighborhood associations have complained to AEPB as most problems with the sewer system have to be reported to the agency.

This option seems to provide additional advantage to households with higher socio-economic status, while those that need this highly effective voice the more (the underclass), live in apartment blocks, which do not have these associations. And even for the informal neighborhood groups that were set up periodically to address utility problems, free riding tends to kill the efficacy of the collective actions. Another impediment to collective voice was perhaps because Abuja is a non-traditional city and heterogeneous, which reduces the ability of neighbors to act collectively. Even though complaining by a group of neighbors was more successful than individual voice, it was less effective than that of the formal associations because when neighbors complain through associations they were often successful for water and refuse problems but rarely for sanitation hence the lower efficacy levels for sanitation in Table 7.3. Whereas the efficacy of individual voice was evaluated as low because when residents complained to the utility agencies they were often not responded to as such they do not even bother to complain again thus leading to further low strategy utilization. These findings corroborate the hypothesis that generally the louder the voice the more likely an agency would respond (Hirschman, 1970: p. 31–33).
Table 7.3: Efficacy and utilization of voice strategies

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Collective Voice by (i) formal residents’ associations</td>
<td>High</td>
<td>High</td>
<td>Moderate</td>
<td>13</td>
<td>12</td>
<td>10</td>
</tr>
<tr>
<td>(ii) group of neighbors</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Low</td>
<td>15</td>
<td>14</td>
<td>17</td>
</tr>
<tr>
<td>Individual Voice</td>
<td>Low</td>
<td>Moderate</td>
<td>Low</td>
<td>16</td>
<td>8</td>
<td>9</td>
</tr>
</tbody>
</table>

Contrary to similar studies in Lagos and Delhi, voice strategies have been highly utilized in Abuja especially for piped water and sanitation, though few respondents are skeptical about reporting because they are public employees. While only 17% and 12% of households dissatisfied with water supply reported ever complaining to city officials in Lagos and Delhi respectively, 41 of the 60 respondents collectively and individually reported problems to the utility agencies. A possible reason for this is that, as increased level of voice correlates with higher levels of education and income (Campbell et al, 2007), in both Lagos and Delhi there might be large proportion of underclass that could not voice. But in Abuja city whose function is typically administrative, we would expect the dominant population to be fairly educated and able to use voice more easily.

Low utilization of voice for refuse collection problems (18 cases) is an issue worthy of notice as an indication of less problems or it could also mean that the service is less important. Even in the US where citizens are expected to be more educated than those in Nigeria, there is evidence that few households complain about garbage collection. For example, a study in Chicago by Devereaux and Weisbrod (2006) found that only one-fifth of those citizens that reported being “very dissatisfied” with garbage collection complained. Demonstration as an example of collective voice in the EVLN framework has been negligibly supported by the study (2 cases) most likely because of the availability of quasi-exit strategies as alternatives or perhaps due to lack of awareness of citizen rights or because of restrictions on demonstrations by law enforcement agencies in the developing countries. The next section presents the conclusions about investment dimension of the EVLN strategies, which is followed by conclusions about loyalty strategies.
7.1.3 Conclusions about Loyalty Strategies

When citizens are satisfied with city services, we should expect the default form of loyalty, such as payment of bills and taxes promptly and commending the performance of the utility agencies (Lyons & Lowery, 1989). Whereas, if households are dissatisfied, strategies such as neglecting the problems, exit to other areas where services are better, complaints about dissatisfaction and high levels of quasi-exit strategies are the expected responses.

In this study, refuse collection received highest level of loyalty (35) among the three services, suggesting that it is performing better than the other two, then it is followed by water (22) and sanitation (18) (Table 7.4). Improvement in refuse collection through the partnership is one of the apparent reasons for the loyalty as supported by a previous study (Mohammed et al., 2006). Payment of bills is effective in guaranteeing continuous delivery of services except for sanitation that an individual cannot be excluded from. Residents who were not loyal in paying their utility bills get their water supply disconnected and refuse not picked up.

Table 7.4: Households’ utilization of loyalty strategies

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Water</th>
<th>Utilization</th>
<th>Sanitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loyalty of Satisfaction</td>
<td>22</td>
<td>35</td>
<td>18</td>
</tr>
<tr>
<td>Employment</td>
<td></td>
<td>friends/tribe/religion</td>
<td></td>
</tr>
<tr>
<td>Passive Loyalty of Dissatisfaction</td>
<td>10</td>
<td>0</td>
<td>23</td>
</tr>
</tbody>
</table>

However, contrary to expectation, loyalty strategies in this study appear higher than similar studies in developing countries. Based on secondary data and author’s observation of problems with the provision of basic urban services in Abuja, especially tap water, one would expect very little loyalty to the utility agencies or the city administration. But it is quite an interesting irony that many a times after respondents have narrated their plight with delivery of the services, they followed it with a kind of commendation or provided the agencies with some excuses. This may be partly connected to household members who are employees of the public sector and thus not willing to admit problems with the services provided by their employer. There is also evidence that loyalty was a result of improvement on the prior condition of services.
or because households compare service delivery in Abuja with other cities elsewhere, they speak well of the services.

We can also understand loyalty in terms of hierarchies as respondents were more loyal to their homes, then neighborhoods before the city by showing active support at household and neighborhood levels to solve problems, but only passively loyal to the city by patiently waiting for situation at city level to improve. To wrap up the discussion, categorizing loyalty as only a passive response in the EVLN model that this author criticized tallies with the opinion of Barry (1974) who, about three decades ago, suggested that loyalty does not just mean a mere reluctance to exit or voice but it could also refer to positive commitment to raise the quality of a service by working for it and where one thinks it has deteriorated “seeking to change it” (p. 98).

7.1.4. Conclusions about Neglect Strategies

Neglect strategies are destructive responses similar to exit, which are not employed to improve the situation and hence in Table 7.5 the column for efficacy level is missing. For partial neglect that refers to deciding not to complain to the utility agencies, 22 interviewees neglected refuse collection problem, possibly due to its low importance. In the case of partial neglect of water supply problems, its utilization (19) is perhaps because Water Board is often not informed about problems such as water outages and pipe bursts. With regards to sanitation, few utilization of neglect (13) is probably because only the problems located away from homes were not reported or addressed via quasi-exit. Other issue like nonpayment of bills is another form of partial neglect that has been employed mainly for refuse and sanitation problems but not for water because of the dire consequences of disconnection for not paying water bills.

Complete neglect, the do-nothing behavior, in the EVLN model is mainly used in the case of refuse collection problems where residents just ignored a pile of garbage by neither reporting to the authorities nor getting rid of it through quasi-exit strategies. However, it should be noted that the level of neglect for refuse reported in this study (38) is because residents know that the delay is often temporary. As a result of improvement through the partnership, often residents do not need to complain or hire informal refuse collectors but just neglect it for a while before the contractors come and pick up the garbage. For lack of water and problems with sanitation within homes, complete neglect is very rare (hence very low utilization in Table 7.5) because households can decide not to inform the utility agencies, but they have to definitely
devise a means of getting water from alternative sources or fixing the sanitation problems outside the public sector due their necessity. As such, this author refers to refer to partial neglect as another form of quasi-exit strategies.

| Table 7.5: Households’ utilization of neglect strategies |
|----------------|----------------|----------------|
| Strategy                  | Water | Refuse | Sanitation |
| Partial Neglect – no voice | 19    | 22     | 13          |
| Complete Neglect – no voice, no exit | 3     | 38     | 10          |

In general, cases of neglecting basic services like water and sanitation and to some extent refuse collection are expected to be very few because they are basic necessities of life. This study corroborates prior studies like the one on municipal water supply in Lagos where only 1% of the “dissatisfied” residents ignored the problems with water delivery (Acey, 2008).

7.1.5 Conclusions about Investment Dimension

Proposing the investment dimension to the EVLN model is very necessary within the context of developing countries. Classifying the EVLN strategies along the active/passive and constructive/destructive dimensions is inadequate. This is because as the strategies have different efficacy levels and require varying levels of user investment for them to be more effective in developing countries, it is very relevant to have an additional dimension that would allow measuring and classifying these strategies along this dimension.

For example, coping with water shortage involves building borehole, sending children to fetch water or using cars and storage. These options require different levels of user investment to make them successful and have different efficacy levels. As such, this new dimension would allow us to evaluate and measure these strategies along the dimension instead of classifying all of them as just active quasi-exit strategies. Similarly, within voice strategies, protest or demonstration, face-to-face complaints, writing letters, community efforts, etc are all form of constructive responses that, apart from being of different efficacy levels, but also require different levels of investment of time and money. Therefore this new dimension is very important especially in developing countries where the strategies vary in great deal.
7.2. Conclusions about Factors Influencing Choice and Efficacy of Response Strategies

Seven categories of factors have been identified as having influence on the choice and efficacy of the response strategies at different levels (Table 7.6). The factor with the highest level of influence (51 responses) is the cost of employing a strategy. According to this study, the cheaper a strategy is, the higher its utilization. For example, the cheaper and less-safe quasi-exit alternatives (e.g. local well) are preferred over the more expensive but safer options (e.g. borehole). This finding supports an empirical study in Delhi where the probability of households having borehole or overhead tank diminishes with income as one household out of three has a borehole when the monthly income is above 8,000 Indian Rupees (Zerah, 2000). Likewise, residential relocation from Phases II and III to Phase I where services are perceived to be better was very rare because of its high costs. This corroborate the opinion of Withey and Cooper (1989) that the costs of responses affect the choices users make, because if the cost of Tiebout-exit is very high, dissatisfied household would not move but they may stay and use voice or neglect. Similarly, investing on improving public service infrastructure and/or repairs and using quasi-exit requires financial capability, but high cost of these strategies encourages neglect.

Second, concerns for health threat from problems is found to also strongly dictate the choice of coping strategy next to cost. In this study, 48 respondents indicated their concerns for diseases as the major reason for not neglecting sanitation and refuse problems and for not utilizing some quasi-exit strategies like collecting garbage inside car trunks or buying water from local vendors. Also, location of problems as an influential factor has been supported by 36 responses. Lack of water and problems with sanitation system at home are considered problems that respondents cannot neglect but addressed through complaints or purchasing water and hiring private artisans to fix the problems or by even intending to change residence. However, issues like refuse heaps or water and sanitation problems that are located on the streets are often neglected or responded by complaint but not to the extent of exit. Magnitude and severity of the problems has been moderately influential (31 responses) in this study. The more severe the problems, the more likely residents employ active responses of Tiebout-exit, voice, quasi-exit or even invest their resources and the less severe or “minor” the problems are, the more likely they are addressed through neglect or loyalty (passive responses). This finding supports the opinion of
Lyons and Lowery (1986, p. 334) that the higher the level of current dissatisfaction with a service, the more likely the users undertake the more destructive responses like exit.

Third most important factor, supported by 43 responses is the nature of the services being necessities of life, which discourages neglect but promotes voice, investment and quasi-exit or even Tiebout-exit strategies as households have to find alternative sources of water and sanitation services. Likewise in the context of monopoly provision of water and sanitation, there is no incentive for residents to exit because the same utility agencies provide the services in all the districts; hence relocation would not make any difference. Monopoly also encouraged neglect in some cases when prior complaints to utility agencies have not been successful.

The necessity nature of basic services as an important factor that influences the choice of strategies provides support to earlier studies. Even in developed countries where citizens are more likely to complain or change residence due to unsatisfactory services than those in the developing countries, there is evidence that they do not do so for services that are less important. For instance, only 1% of households that were dissatisfied with parks in a survey in Chicago complained and likewise garbage collection problems weren’t among the major determinants of intention to relocate (Devereaux & Weisbrod, 2006). These findings imply that the other 99% of the respondents did not consider the problem with parks worth the cost of voicing and it also means that the intention to change residence resulted from dissatisfaction with services other than refuse collection. Similar study in UK found that only dissatisfaction with health and education services led to exit from public to public services (Dowding & John, 2008).

The fourth factor is housing and neighborhood condition that has moderate influence according to about half of the respondents. This study concludes that housing type allows and prevents utilizing some quasi-exit options. For example, installing boreholes or overhead tanks is difficult for apartments and living in a high-rise makes fetching and storing water less effective. Tenure status also influences the kinds of quasi-exit options households can utilize. For example, homeownership discourages Tiebout-exit but allows installing overhead tanks or drilling boreholes. This finding confirms the mainstream EVLN literature that households with high levels of investment, all other things being equal, are more likely to exercise voice and loyalty when faced with dissatisfaction rather than Tiebout-exit or neglect responses (Lyons & Lowery, 1989; Rusbult & Farrell, 1983). This result also corroborates the study in Delhi where out of the 102 respondents that have boreholes in their homes, only 10 are renters (Zerah, 2000). Also,
living in neighborhoods of high quality (e.g. having good roads and important land uses) discourages exit and neglect but makes voice more effective as complaints about problems from these areas were seldom unsuccessful. This also supports May’s (1982) opinion that expectation about good neighborhood or housing conditions discourages citizens from residential relocation.

Fifth, socio-cultural factors played low roles in the choice and efficacy of the strategies. A good relationship with neighbors, as reported by 28 respondents, enhances collective voice and made quasi-exit more effective. In nine instances, knowing someone in government made complaints more effective, helped in getting public water tankers or increased water pressure and number of hours of water supply to a neighborhood during rationing, thus enhancing storage option. Alert households (more educated) were found to utilize voice strategies more often and avoided unsafe quasi-exit strategies (22). Also, employment in the public sector discouraged 11 respondents from formally complaining for fear of victimization. Lastly, giving gifts and tips during complaints made only 8 cases of voice more successful but encouraged quasi-exit options when residents avoided giving the tips in favor of hiring informal artisans. Negative attitudes of households like free-riding and I-don’t-care attitudes discouraged collective voice and made quasi-exit options less effective.

Sixth, dissatisfaction with prior voice due to the inefficiency of the public sector in service delivery discourages loyalty and further complaints, but promotes quasi-exit and neglect. Delays/lack of response from utility agencies and the requirement for a complainant to buy materials discouraged 37 residents from complaining but encourages quasi-exit or neglect. Announcing service disruptions on the media enhances the efficacy of water storage of 26 respondents. On the mode of complaining, face-to-face reporting is found to be more effective than telephone calls or writing letters by 14 interviewees. Often when household complain collectively, they are more successful in getting problems addressed than when they voice individually. These findings have been supported by the EVLN literature. For example, Rusbult and Farrell (1983) posited that prior experience with the efficacy of voice or the possibility that it will be effective in improving the performance of the services matters in selecting which response strategy to use.
Table 7.6: Factors that influence the choice and efficacy of coping strategies

<table>
<thead>
<tr>
<th>Factor</th>
<th>Count</th>
<th>Effects on EVLN strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nature of the services:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(i) Necessity of the services;</td>
<td>43</td>
<td>Necessity of services prevents neglect but promotes voice, quasi- and provider-exits and investment. Monopoly precludes provider- and Tiebout-exits and discourages voice but encourages quasi-exit and neglect</td>
</tr>
<tr>
<td>(ii) Monopoly provision.</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Level of dissatisfaction:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(i) Magnitude and severity of problems;</td>
<td>33</td>
<td>Minor and short-term problems are neglected without Tiebout-exit. Fear of health hazards discourages neglect and some quasi-exit strategies. Location of problems at or close to homes discourages neglect but promotes voice or quasi-exit</td>
</tr>
<tr>
<td>(ii) Health hazards;</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>(iii) Location of the problems,</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>Cost of alternatives:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>money; time; and convenience.</td>
<td>51</td>
<td>Cheaper quasi-exit alternatives are preferred over the more expensive options. Ability to pay make investment and voice more effective but lack of it encourages neglect. High cost of Tiebout-exit makes it unlikely</td>
</tr>
<tr>
<td>Housing and neighborhood conditions:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(i) Housing affordability;</td>
<td>29</td>
<td>Housing affordability and homeownership prevents Tiebout exit. Tenure and type of housing allow some quasi-exit options, (e.g. boreholes and overhead tanks are difficult for apartments and rental houses). Living in high quality neighborhood discourages exit and neglect and makes voice more effective.</td>
</tr>
<tr>
<td>(ii) Tenure and type of housing;</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>(iii) Neighborhood quality.</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>Socio-cultural factors:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(i) Degree of neighborliness;</td>
<td>28</td>
<td>Good relationship with neighbors encourages collective voice and makes quasi-exit more effective. Knowing somebody in government makes voice more effective and getting public water tanker easier. Level of education encourages voice but discourage some quasi-exit options. Negative attitudes discourage collective voice and quasi-exit options. Employment in the public sector discourages voice. Gifts make voice more effective and encourages quasi-exit</td>
</tr>
<tr>
<td>(ii) Social capital;</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>(iii) Level of education and attitudes;</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>(iv) Employment type;</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>(v) Gifts and tips.</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Inefficiency of the public sector:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(i) Reporting approach;</td>
<td>14</td>
<td>Face-to-face reporting is more effective than telephone calls or writing letters. Collective voice is more effective than individual. Delays/lack of response and the requirement for a complainant to buy materials discourage voice but encourages quasi-exit.</td>
</tr>
<tr>
<td>(ii) Delays, lack of response and shortage of equipments;</td>
<td>37</td>
<td>Announcing service disruptions make water storage more effective.</td>
</tr>
<tr>
<td>(iii) Prior knowledge of service disruption.</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>Planning and regulations:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(i) Modern city image;</td>
<td>12</td>
<td>To maintain modern city image, quasi-exit options (e.g. Mairuwa and informal refuse collectors) are banned in some districts. Payment of bills makes voice more effective and lack of it promotes quasi-exit. Regulations dictate the extent of repairs on water and sewer network and lack of enforcing regulations encourages some improper quasi-exit strategies like burning of refuse.</td>
</tr>
<tr>
<td>(ii) Payment of bills as a condition for services;</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>(iii) Environmental regulations.</td>
<td>17</td>
<td></td>
</tr>
</tbody>
</table>

Lastly, city planning and regulations played little role in determining which response strategy household take in Abuja. Twelve respondents reported that the city banned some quasi-exit options like Mairuwa and informal refuse collectors in Phase I because these approaches are
considered as “insult” to the modern city. Eight interviewees mentioned that the utility agencies only responded to complaints from users who paid their bills, otherwise informal alternatives are used to fix water and sanitation problems or evacuate garbage. City regulation also dictates the extent of using informal artisans in maintaining water/sewer infrastructure based on where the problem is located and lack of enforcing environmental regulations encourages the use of improper means of waste disposal and open defecating as reported by 17 respondents.

7.3 Conclusions about Sequences in Choosing the Response Strategies

This study finds that the sequences of choices households make to respond to unsatisfactory public services are much more complex than simple EVLN model can capture. Prior studies typically report sequences between two different strategies. According to Lyons & Lowery (1989), people may choose to voice, and then if they are still not satisfied with the organizational response, they may then choose to exit at a later date or they may decide to exit first and then voice from outside. Other studies reported that users neglect problem when a complaint is unsuccessful or neglect a problem first and later complain. However, this study provides deeper understanding of the complexity of sequences of strategies households use to respond to discontent with the delivery of basic urban service within the context of developing countries.

First, the author has not come across any study that explored the sequence of using different options within each of the strategies. In developing countries there are numerous possible sequences of choices within the dominant but often under-reported quasi-exit strategies. For example, there are five quasi-exit options of coping with water outage and households, based on their income, city regulations and housing conditions, etc, navigate from water storage, to using boreholes, to buying from vendors and to sending their family members to fetch water from neighbors or to using their cars to obtain water from public buildings in other districts in different successions (refer to Figures 7.1 - 7.10). These various sequences of these options and the conditions that influence the order have been covered in details in chapter six.

Within the voice strategies too, collective and individual voices were utilized in either order. Individual complaints were often the first option and when it is unsuccessful, households come together to collectively voice. In the opposite, lack of commitment from neighbors to
collective voice or free-riding often led to abandoning it for households complaining individually. Vertical voice, where a hierarchy of order in complaining is utilized, has also been reported. Such sequences include reporting problems to landlord first before the utility agencies for renters. For households living in employer-provided housing, the first option was usually informing the maintenance section (or estate department) and then the employer providing the housing (e.g. agency, corporation, institution, security agencies, etc) but often never to the “outsiders” (utility agencies). Understanding this kind of sequences is relevant because in the developing countries centralization is dominant and going against this hierarchy could jeopardize a household’s employment when she works in one of such establishments, or as one renter noted: “if you report to the authorities, the landlord may eject you” (Gwarimpa04).

Secondly, like previous EVLN studies, this study also found sequences between different strategies. The sequence with overwhelming support is to complain first, and then if it is unsuccessful, users employ quasi-exit options or neglect the problems. Also, voice and neglect strategies were employed interchangeably. A number of households complained first and neglected the problems later when the complaint was not successful, especially for refuse collection that is at lower hierarchy of necessity. Sequences between neglect and quasi-exit have also been highly reported. Minor problems were often neglected but later addressed through quasi-exit when respondents could no longer tolerate the problems. However, the sequence that has not been supported in this study is residential relocation followed by complaints from outside.

Lastly, even the sequences between different EVLN strategies are not always binary as most EVLN studies established, because this research found evidence of using multiple options. For instance, a few households started with neglecting a pile of garbage but when it has not been picked for some days, they then report the problem to the agencies and when that is still not successful and the garbage started producing stench, they organize and hire informal refuse collectors (quasi-exit) to dispose the garbage (see Figure 6.9 in chapter six). This wraps up the conclusions about the findings on the four research questions and the next section underscores the implications of the study for theory, methodology and practice.
7.4 Implications of the Study Findings

This section underlines the implications of this study for theories of urban service delivery and citizen response to dissatisfaction with urban services (EVLN model). It also presents the study implications for research method as well as for policy and practice.

7.4.1 Implications for Theory

(a) Implications on the Theories of Service Delivery: This study supports the ecological hypothesis where location at the central city plays a major role in getting better quality urban services. One major implication of this study is that based on interviews, personal observations and literature review, Phase I located at the center of Abuja has been provided with better urban services to the detriment of suburban Phases II and III that are inhabited mainly by middle class and junior government officials. This finding is contrary to Abuja Master Plan proposal of equal provision of urban services to all parts of the city (IPA, 1979, p. 117). However, Abuja is not an exception because distribution of water in Delhi, another capital city, also varies by zone. While the northern and eastern zones were getting an average of 21 and 16 hours of water per day respectively more than 70% of the inhabitants in the south and west zones got less than 2 hours of water per day (Zerah, 2000). In Brasilia too, the central city is orderly planned and provided with better services compared with the fifteen peripheral districts (Kaflouka, 2009). Werna (2000) also found that in Chittagong all wards in central part of the city are connected with piped water unlike the peripheral areas that are mostly not served.

The second implication of the study finding is the dominant role of power elites that used their position of power in government and made the utility agencies more responsive to their complaints and provided them with water during shortages. Other members of the power elite also asked the agency officials to favor their neighborhood with more hours of water supply during water rationing or more frequency of refuse collection to the detriment of other areas. Whereas, the households living in the suburban districts are mainly low income and/or junior civil servants that lack the political power to insure bureaucratic response to the problems they are facing with service delivery (Lineberry, 1978).

Lastly, findings of this study differ from prior research where ethnicity or tribal affiliations were found to influence service delivery in developing countries as the underclass hypothesis expects. In this research, there was no evidence of influence of ethnicity on the
delivery of urban services. Similarly, ethnicity was not found to influence the efficacy of voice or any other coping strategies. This suggests that rather than the ethnicity, the city is segregated on political influence and wealth; a finding supported by Ebo (2006). The author’s personal experience of the city and its inhabitants also supports the notion that elites segregated themselves in Maitama, Asokoro and Wuse II districts in Phase I and the middle class live in remaining parts of the city while the poor reside in satellite and squatter settlements.

(b) Implications on the EVLN model: For the EVLN to be effective in explaining user response to dissatisfaction with publicly provided essential services in developing countries it needs to be modified to accommodate the context within which services are provided such as inefficiency of the public sector, informality and other challenges that are peculiar to cities of this region. As such this author proposed modifying the model by introducing a third dimension coined an “Investment” (Figure 7.1) to categorize the EVLN strategies into those that require user investment and those with higher efficacy levels. This new dimension is described as well as the conclusions for each of the response strategies as follows:

![Investment Diagram]

**Figure 7.1: The proposed modified Exit, Voice, Loyalty and Neglect (EVLN) Model**
(i) **Investment:** This dimension is proposed to classify those coping strategies that involve active participation in cash and kind by consumers on their own to enhance the efficacy of the strategies employed to respond to the delivery of necessary public services. For example, this dimension when applied to voice involves strategies where residents substitute the function of the state by coming together to finance executing projects related to maintaining and improving service delivery. In developing countries, households go extra miles to repair, replace parts, extend services and do other improvements on the service infrastructure like water and sewer pipes owned by the utility agencies. Similarly, others go to the extent of buying refuse bins on their own from the market when they have not been provided with those supplied by the agency or when the bins are not sufficient.

This new dimension is different from the existing two because it provides a means of categorizing the response strategies based on the level of user investment of resources required to make them effective, while the constructive-destructive dimension only measures whether a strategy is employed to solve a problem or not and active-passive dimension measures whether strategies involve action or passivity. This new dimension specifically provides a means of creating a hierarchy of the strategies based on how much resources households need to invest for the constructive-active (e.g. voice), constructive-passive (e.g. loyalty) or destructive-active (e.g. exit) or destructive-passive (e.g. neglect) responses to make them effective.

(ii) **Exit:** One quite striking conclusion of this study is that Tiebout-exit in the developing countries is not as simple and easy as it appears in the literature, which focuses mostly on the developed world, where individuals that are dissatisfied with services such as schools would just decide to relocate. For instance, the average American changes residence several times in her lifetime because homes and mortgage financing are available and jobs are spread across both public and private sectors and across counties and states. But in the third world such opportunities are scarce and mobility is further constrained by urban bias, strong cultural ties to a particular locality, and stringent residency laws across local or state jurisdictions, etc. Similarly, quasi-exit needs to be stressed as the most dominant response strategies to unsatisfactory urban services though they are not common in the developed countries. As such, in the ELVN framework, quasi-exit should be recognized and added together with Tiebout- and
provider-exits (Figure 7.1). Quasi-exit is a separate kind of exit that differs considerably from provider exit because the latter involves completely changing a service provider while the first is a temporary exit to informal alternatives while still remaining with the main public service provider.

Further it should be noted that not all exit strategies are destructive as hypothesized by the EVLN model because in the case of public services provided by monopoly, massive quasi-exit would not lead to decline of service provider. Instead, quasi-exit strategies complement the public utility agencies rather than destroy them (WHO, 2004). While the literature on the EVLN model reported that in the developed world the underclass households (poor and uneducated) are locked in areas where services are bad and they could not exit to better service jurisdictions, in Abuja we have a bulk of households who are locked in their neighborhoods unable to move, not just because of poverty or low educational level but more importantly due to accommodation shortages throughout the city.

(iii) Voice: A very important implication of this study regarding the voice strategy is the efficacy of collective voice through residents’ associations in making the utility agencies more responsive to complaints, while the EVLN literature recognize the efficacy of just collective voice over individual. We should also acknowledge the higher efficacy of face-to-face mode of complaints compared to telephone calls or writing letters in developing countries; issues that previous studies have not been able to document. In a different vein, contrary to similar studies in developing countries, respondents appear to be alert by actively voicing their discontent to the utility agencies, though few indicated that they have never complained (inert users). One possible reason for this is that residents of capital cities like Abuja, whose main function is administrative, would be expected to be relatively educated. Accordingly, the more educated citizens are the more alert they would be to complain when they are dissatisfied with services (Lyons and Lowery, 1989).

Another form of voice that that is missing in the traditional EVLN model that should also be recognized is the role of media. This author has reviewed several local newspaper articles available online, where residents write articles about the problems with service delivery in the city. Likewise, reporters themselves add their voice by interviewing residents and informal water vendors and refuse collectors and through covering news of a protest by residents when they
carried buckets to media houses or sent their wives and children out to demonstrate against lack of basic services in order to make their voice very loud and to draw public sympathy.

(iv) Loyalty: This study cautions about interpreting responses such as speaking well of the city, voting or attending public functions as indications of loyalty to services within the context of developing countries as the EVLN model suggested (Lyons and Lowery, 1986, p. 331). The passive support of praising the city or service delivery in Abuja and probably other cities of developing countries is mostly as a result of comparing the delivery of services with other cities or as a result of improvement from prior situation. Furthermore voting for a candidate may not be based on her performance in service delivery but other reasons like ethnicity, religion, or money and remaining with a service may not be loyalty but lack of options in a monopoly. Therefore, this study suggests that the culture of not standing up to or castigating authorities in the developing countries and loyalty to ones’ job in the public sector are the main reasons some households to speak well about the provision of services or city though service delivery is poor as confirmed by evidence in some sections of the interviews, personal observation and secondary data.

(v) Neglect: The study also deepened our understanding of the concepts of neglect within the context of delivering basic urban services in the developing countries. Services are not of equal importance since water and sanitation are necessities of life and as such completely neglecting them, as neglect is defined in the EVLN model, is impossible, although one could ignore reporting problems to utility agencies. Therefore, this author recommends splitting neglect into “complete” and “partial” neglects to address the dilemma of dealing with these issues. For instance, can a person neglect a problem of lack of water? The answer is both yes and no. Yes, because a resident can decide not to complain to the utility agency; an approach that is neglect. The answer could also be: no, because she cannot neglect getting water from alternative sources or changing residence (exit) because life cannot go on without water. As such complete neglect (lack of any response strategy) can be used to apply to responding to issues like low water pressure, broken water and sewer pipes located away from homes, refuse heap at central collection point etc that residents can completely ignore. On the other side, the newly coined “partial neglect” can be applied to problems like lack of water or faulty sanitation
(blockage/broken pipes) at home that cannot be completely neglected but at least a coping strategy of obtaining water from vendors or hiring informal artisans (quasi-exit) or using residents’ own resources (investment) must be used to fix the problems.

7.4.2 Implications for Research Methods

A noteworthy contribution of this study is also in its methodology where qualitative data was used to address a deficiency in most EVLN studies of using cross-sectional designs that makes it impossible to establish any temporal differences in the use of the response strategies (Dowding et al, 2000). But in this study, exact accounts of the sequences of using the strategies have been established. Further, unlike this study that measure households’ actual behavioral responses to unsatisfactory delivery of urban services, most prior studies measured intended responses, which makes it unclear if people who said they would voice or exit in response to an unhappy situation will do so in reality.

This study is the first attempt to evaluate the efficacy of the response strategies using a simple evaluation technique based on three criteria. Prior studies used descriptive statistics of user who utilized a particular strategy, but unlike this study, there was no context and conditions within which the strategies were utilized. They also used regression analysis to model the likely factors that explain user preference of a particular strategy, which limits the variables to only those that can be captured in quantitative terms. However, in this study several factors provided deep understanding of the reason why users decide to opt for one strategy but not others. Similarly, capturing the sequences of coping strategies can only be achieved through a qualitative study such as this dissertation.

7.4.3 Implications for Policy and Practice

Inadequate provision of public services can compromise health, hinder economic growth and stifle efforts towards poverty reduction, achieving the MDGs and sustainable development. Similarly, households coping strategies have important implications for policies and practice of urban service delivery as underlined in this section.
(a) **EVLN – Performance Indicator for the Provision of Urban Services:** This study suggests to utility agencies providing basic services in developing countries to utilize the modified EVLN model as an indicator of the performance of the services they provide from users’ perspectives (output side). In a representative survey, the percentage of city resident who are utilizing a coping strategy like water vendor or informal refuse collectors is an indicator of the severity of the problem with water supply or garbage collection respectively. As such, the agencies should change their perception of the alternative coping strategies (quasi-exit) as problems themselves in the city but rather as indicators that service delivery is poor. For instance, instead of chasing the Mairuwa (cart push vendors) and scavengers from the cities, their presence on the streets signifies that water supply and refuse collection are inadequate and the agencies should use that to take action to address the problems.

(b) **Threats to Public Health and Safety:** Public health practitioners in Abuja should understand the public health and safety implications of the high level of utilizing unsafe alternative water and sanitation services that was found in this study. Using water from unimproved wells, rivers/streams and local vendors and emptying of sewer into drainage or water bodies could lead to sicknesses such as typhoid, diarrhea and cholera, to not only those using these strategies but can also spread to the general population (Hewett & Montgomery, 2001; WHO, 2004). Further, lack of maintenance of sewer and water network often result to pipe burst causing sewage overflow and contamination of piped water thereby posing health threat as one resident narrated here:

> When we had that problem [water pipe leak], most of them were sympathetic because I collected the water and took it them and they said that they have taken it to their laboratory to test and actually they discovered that it was mixing with sewer; it was smelling we were even drinking it initially without knowing until it was too much (Wuse02).

As such there is need for greater concern from the utility agencies and health departments to find ways of addressing the problems since illnesses could result from using these unsafe coping strategies and that would consequently put more burdens on the health care system. Therefore, concerted efforts need to be taken on the part of the government to work with the
communities using these approaches to improve the safety of the alternatives pending when the services are provided to the areas.

(c) Undermining Achieving the MDGs and Sustainable Development: The high level of using unsafe water sources and sanitation coping strategies found in this study could also undermines the effort of Nigerian government of achieving the MDG goal 7 few years to the target year. With this situation in Abuja, the capital city of Nigeria, where urban bias phenomenon (in terms of huge financial investment in the city), is apparent, what should be the fate of residents of other cities and rural dwellers who obtain drinking water from mostly unsafe sources and use unimproved sanitation services (UN-Habitat, 2008)? The government should also make it a priority to improve on the delivery of potable water because drilling of multiple boreholes could deplete the underground water aquifer and discharge of untreated sewage into water bodies contaminates the water and maximizes the cost of water treatment (WHO, 2004). These are issues of environmental concern because achieving environmental sustainability requires adequate treatment and disposal of wastewater, which contribute to better ecosystem, resource conservation and less pressure on limited freshwater resources. But with these practices going on in Abuja, how is the city going to achieve this goal? Therefore, there should be a policy by the city government that should minimize these practices.

(d) Low Economic Productivity: Employing these coping strategies would negatively affect local economy due to lack of investments from savings when households spend substantial part of their income to provide alternative services. It also hinders people’s ability to work as productively as possible when several hours are spent fetching water, looking for informal artisan or garbage collectors or in employing other coping strategies. This is important because saving money and time may translate into higher productivity and school attendance for children (WHO, 2004). As such, public spending in improving on water and sanitation delivery is not a fruitless exercise or a mere social welfare, but a sound economic investment. A recent cost-benefit analysis undertaken by WHO found that achieving the MDG target in water and sanitation would bring substantial economic gains: every $1 invested would yield an economic return of between $3 and $34, depending on the region. Among the health benefits would be an average 10 percent reduction worldwide in episodes of diarrheal diseases (WHO, 2004, p. 20).
(e) **Need for More Collective Action:** This study found that formal residents’ associations make collective voice very effective by demanding better services or working out alternative coping strategies. A respondent reiterated the importance of these associations in solving service-related problems: “*It would have been better if we had neighborhood association; the voice will be bigger and stronger than that of an individual*” (Jabi03). For instance, the only cases of provider-exit were utilized by the associations where they bypass the partnership and directly contracted out refuse collection to private companies. In a similar vein, the associations make it possible to build shared/community boreholes which are typically unaffordable to individual households due to its high cost of drilling and maintenance. Though it is highly effective in addressing problems with service delivery, level of utilizing residents’ association ranges from low to moderate as only gated communities and public housing estates were found to have such associations. However, the caveat with this arrangement is that it can be expensive as members of such associations are levied monthly or annuall for carrying out these activities.

### 7.5 Recommendations

Based on the findings of this research the author presents the following recommendations to the three main actors in the planning and provision of urban services in Abuja for consideration:

#### 7.5.1 Recommendations to Federal Capital Development Authority

Completely relying only on time- and resource-intensive centralized public piped-water, refuse collection and sanitation systems will leave hundreds of thousands of people without safe water and adequate sanitation far into the future. As such, in the interim we need to find ways that the city can partner with the communities to improve on the various alternatives coping systems that households are already using.

(a) FCDA local health department should partner with the communities that are yet to be connected with public services and NGOs to educate the people on the health and safety dangers associated with using unsafe and unhygienic alternatives like burning and dumping of refuse inside water bodies or on land, using water from streams/rivers and unprotected local wells for
domestic use and unhealthy disposal of liquid waste around residence or into drainage channels and to encourage them to use safer alternatives like boreholes, protected wells, improved septic system and dumping of refuse into centralized collection bins that can be additionally provided.

(b) FCDA administration should also partner with these communities to provide safer alternative sources of water and sanitation like communal boreholes and public improved septic systems respectively; an approach that is highly recommended in developing countries due to its success in countries like Tanzania (Harris, 2009). For the borehole, an arrangement could be made where the communities can provide some part of the funding, which could create a sense of ownership and make the alternatives last long. While the state can provide partial financing, technical assistance and capacity building on how to establish, operate and maintain the improved systems.

(c) Community involvement in service provision is highly recommend as it will allow people to have input into issues directly affecting them. The first step towards participation is for the FCDA to encourage residents to form associations at residential districts that they can relate with, because a few residential estates have formal associations that have been more effective in getting problems addressed than groups of neighbors or individual households. It would also be easier for the utility agencies to fix several problems in a neighborhood at a time instead of bit by bit by individual complaints that the maintenance staffs have to address one-by-one.

7.5.2 Recommendations to Abuja Water Board

(a) The Water Board should design and provide households with water safety plans for managing and protecting the quality of water from sources, transporting and storage, and during usage as recommended by World Health Organization. According to Sutherland et al, (2011) point-of-use chemical and solar/chlorine disinfection, safe water storage, and behavioral change, have been widely field-tested and are found to be self-sustaining and successful in improving water safety.

(b) It should also improve its water supply by putting more resources to complete the ongoing project of expanding Usman dam that is supplying water to the city so that more homes can be connected and the households on the network can get water more frequently.
(c) The agency should do away with the planned city dream and consider public stand pipes in strategic location in the districts where building permits were given pending on when they can afford to network the whole streets with water pipes.

(d) It should also improve on the billing system so that meter readers are regular in taking readings monthly and make their staff responsive to maintenance requests on time. Constant supervision of maintenance staff as well as carrot and stick approach of reward and punishment can improve the performance of the staffs. The agency should also devise a decentralized system of paying bills instead of designating few banks and offices as the only bill payment centers.

### 7.5.3 Recommendations to Abuja Environmental Protection Board

(a) As the partnership in refuse collection appears to be performing well, the management of AEPB should strengthen it by removing barriers to effective and sustainable partnership like paying the private companies on time. The agency should also closely monitor the companies to ensure that they pick up refuse regularly, use covered vehicles and dispose garbage at the designated landfills.

(b) A system of evaluating the refuse collection companies, say bi-annually, should be put in place so that those that are found underperforming can be replaced with better functioning ones. Also, issues such as companies using tippers, hiring temporary staff and dumping garbage not at designated landfills should not be tolerated. Communities should also have a say in selecting a company that will be responsible for refuse collection in their district through a participatory arrangement where representatives of the communities could also partake in the partnership.

(c) In terms of sanitation, the board should improve on its maintenance services of the existing sewer network by procuring the required equipments needed for maintenance. Supervisors should monitor the activities of the maintenance staff more closely to make certain that they respond adequately to maintenance and repair service requests. The agency should also ensure that the sewage treatment plants adequately treat liquid waste before disposals.

(d) Further, there is the need to look at the possibility of public-private partnership in the maintenance of sewer and water infrastructure so that the agency can establish a training scheme for the informal private artisans to do repairs more professionally on water and sanitation.
facilities and on how to safely handle solid and liquid wastes. UN-Habitat (2009) recommends cities to work with informal operators through licensing, capacity-building, and enforcement of appropriate regulations.

(e) The agency should also enforce strict penalty on violators of the exiting environmental regulations like open defecating, refuse burning and illegal dumping of both sewage and refuse on land and in water bodies. It should also, at the same time, allow a number of entrepreneurs to establish commercial toilets at selected locations within the city.

(f) On the issue of billing, a more regular collection scheme like monthly or quarterly is more suitable than the annual billing system that is difficult to abide by because it would be more affordable to households to pay in piecemeal than all at once. The agency should also consider contracting the billing process to private companies to distribute bills and collect payments.

7.7 Limitations and Future Research

This study concerns about the strategies for coping with unsatisfactory urban services based on the EVLN strategies. However, the study could not make conclusion about Tiebout-exit as there was no evidence of its utilization by any of the respondents. The research is also not about evaluating the performance of service delivery in Abuja. As such, we cannot generalize the findings on EVLN model as an indicator of the performance of the utility agencies or the failure of the new town model in Abuja. A research design with more representative samples is needed to evaluate the performance of service delivery in the city that would include samples from providers and not just the consumers and they would use more objective input measures like the number hours per day/week when water is provided and its level of pressure, number of refuse pickup per week, average response time to maintenance request, etc.

Similarly, there is the need to study other basic services like electricity, health and education services, parks and recreation that are also important components of city life. Also there is the need to widen the geographic scope of this research by studying the satellite settlements of Abuja that are not bounded by the Master Plan and where the poor mostly reside and the quality of basic services is worst. Alternatively, future research should do a comparative study of the city with the satellite settlements to investigate whether variation in coping strategies
exits because service delivery in Abuja city is guided by the Master Plan but not in the satellite settlements that are old and developing with little planning.

### 7.8 Summary

Urban planning in the developing countries emphasized rational and centralized process of planning urban areas by the experts for the state to achieve egalitarian provision of public goods such as housing and urban services as a means of social change. Several studies have documented the failure of the approach in achieving these noble objectives in the developing countries. However, these studies have not gone further to explore how residents of the planned cities cope with the inefficacy of the approach.

To fill this research gap, this case study of Abuja in Nigeria finds that households respond to discontent with the model in water supply, refuse collection and sanitation services through a variety of coping strategies that have different utilization and efficacy levels. Tiebout-exit was not found to be employed for any of the service because of housing shortage and monopoly but there was intention by renters to relocate when water and sanitation problems persisted. A few gated communities changed their refuse collection companies and some households decided not to connect to public sewer but remain with their private septic system, which is utilized by several households in the rapidly growing Phases II and III whose neighborhoods are yet to be connected with the centralized sewer system.

The quasi-exit strategies where households virtually provide a variety of alternative services in the informal sector are the most dominant means of coping with poor urban services. These coping strategies involve the use of water vendors, boreholes, local wells, public buildings, rivers and rainfall and disposal of refuse by self or hiring informal collectors, or by burning/burying. Residents also hire informal artisans like plumbers and masons for fixing problems with service infrastructure though there is concern about the expertise and capacity of the artisans to address the problems effectively. While these strategies are the most dominant, the majority are less effective as they are costly, unsafe and inconvenient.

Complaints to utility agencies about problems by individuals were often not effective because there is little or no response from the agencies. Voice by a group of neighbors was more effective than individual complaints but residents’ associations were highly effective in getting
their problems solved. Face-to-face mode of voice was found to be more effective than telephone calls or writing letters. Residents often invested their resources to improve or extend the supply of public services within their neighborhoods. Loyalty was mainly as a result of improvement in service delivery or because of comparing Abuja with other cities but not really because respondents were satisfied. Problems that are at lower level of hierarchy of necessity or those that were temporary or located away from homes were often neglected.

This study also deepens our understanding of the variety of factors that influence the choice and efficacy of the response strategies. Factors that are most relevant to this study are necessity of the services, level of dissatisfaction and cost of strategies. Whereas, inefficiency of the public sector and housing and neighborhood conditions reported moderate influence, socio-cultural factors and planning regulations have lowest effect on the choice and efficacy of the strategies (see Table 7.5).

The profound implications of this study is that the households that utilize these coping strategies spend substantial part of their income to pay for alternative services apart from loss of productive time, health & safety threats from using unsafe water and improper garbage and sewage disposal, inconveniences and hardships on the households, more especially children whose education is affected as a result of fetching water or garbage disposal. These issues could undermine the efforts of the government in achieving MDG goal 7 and for equity as a pillar of sustainable development.

Similarly, the dominant role of centralized approach by the state as against the market in shelter provision appears unsuccessful in Abuja and also that inequity in service delivery exist in the city with Phase I dominated by the wealthy and political elites having better services than Phases II and III that are mostly inhabited by the junior civil servants and low-income households. This study also found no evidence of public involvement in the provision of urban services in the city.

This dissertation study is significant in filling the identified gaps in the EVLN literature about how residents of cities in the developing countries cope with discontent with public services. It reechoes then need for recognizing quasi-exit as an independent form of exit and most dominant in the developing world. This research argues that EVLN model is deficient in explaining households’ coping strategy with unsatisfactory basic public services within the context of developing countries. It therefore, proposes a new dimension called investment to
allow categorizing the EVLN strategies based on the levels of resources required to make the strategies effective in improving public services. Similarly, the research proposes splitting of neglect into partial and full neglect to take care of coping with necessary public services like water and sanitation that households can never completely ignored. This study also recommends that the modified EVLN model can be a tool for monitoring the performance of public services from the consumers’ perspectives. This study also informs planning practices through its implications and policy recommendations to improve provision of basic urban services in Abuja and similar cities to ensure more effective service delivery.

In conclusion, access to basic urban services is vital to preservation of life and essential in raising living standard of citizens. Therefore, in the interim, the FCDA and Abuja municipal local government should partner with the communities to improve the efficiency and safety of the alternative strategies of providing basic services in the districts where services are deficient and educate the residents about the risks of utilizing unsafe alternatives that can make communicable diseases to easily spread throughout the city. In the long term, the federal government should make budgetary provision to extend the services to the communities that have not been serviced because adequate and safe urban services can raise economic productivity and wellbeing of the society as a whole.
APPENDIX A

Interview Protocol

Interviewee code________________________________ Date: ______________________________________

Opening questions:
   a. Please may I know where you live in Abuja? ________________________________
   b. For how long have you been a resident of this district? ________________________

SECTION ONE: WATER

Grand Tour Question: Can you recall a situation in which you experienced a problem with the water supply to your home? You can think about it for a minute, and when you’re ready, go ahead and tell me what happened.

(Alternative one: If you can’t recall a situation like that, I wonder if you can relate a similar situation that you are aware of in which somebody else had problems with their water supply.)

(Alternative two: Then can you imagine having such a problem and tell me what you think you would do?)

Follow up questions: (If these aren’t in the story, ask to get answers to these)

1. So why do you think you did what you did?
2. Did your approach change over time? Why did it change?
3. What other approaches did you consider?
4. What kinds of approaches do you know of that other people have taken when they had water problems?
5. Why did you reject the other approaches that you considered and those that others used? (If you need to follow up: What kinds of factors kept you from taking these other approaches?)
6. So how successful was your approach in solving the problem?
7. If you had it to do again, are there things you would do differently?
8. What is unique about you or your situation that explains why you took the approach you took?

If other EVLN approaches are not offered, ask the following:
9. Did you consider moving to another place where you think water supply is better? Why did you not take that action? (If they did undertake this approach, how did they do it and how was it successful?)

10. Did you consider seeking other sources of water without moving from this location? Why did you not take that action? (If they did undertake this, how did they do it and how was it successful?)

11. Did you consider complaining to officials who might be able to fix the problem? Why did you not do this? (If they did undertake this approach, how did they do it and how was it successful?)

12. Did you consider organizing with other people to complain about the problem? Why did you not do this? (If they did undertake this approach, how did they do it and how was it successful?)

If they took action of some form, ask:

13. Can you imagine a situation in which you would not have taken any action at all to deal with this problem? Please describe what that situation would be like.

If they admit a problem with the service and have taken no action, ask:

14. What factors kept you from taking any action?

15. Are there people who might disagree with your approach and your views about this? If yes, how and why would they disagree?

16. Is there anything else I have not asked about water provision that you would like to tell me about?

SECTION TWO: REFUSE

Grand Tour Question: Can you recall a situation in which you experienced a problem with the refuse collection from your home? You can think about it for a minute, and when you’re ready, go ahead and tell me what happened.

(Alternative one: If you can’t recall a situation like that, I wonder if you can relate a similar situation that you are aware of in which somebody else had problems with refuse collection.)

(Alternative two: Then can you imagine having such a problem and tell me what you think you would do?)

Follow up questions: (If these aren’t in the story, ask to get answers to these)

1. So why do you think you did what you did?
2. Did your approach change over time? Why did it change?

3. What other approaches did you consider?

4. What kinds of approaches do you know of that other people have taken when they had refuse collection problems?

5. Why did you reject the other approaches that you considered and those that others used? (If you need to follow up: What kinds of factors kept you from taking these other approaches?)

6. So how successful was your approach in solving the problem?

7. If you had it to do again, are there things you would do differently?

8. What is unique about you or your situation that explains why you took the approach you took?

If other EVLN approaches are not offered, ask the following:

9. Did you consider moving to another place where you think refuse collection is better? Why did you not take that action? (If they did undertake this approach, how did they do it and how was it successful?)

10. Did you consider seeking other means of refuse collection without moving from this location? Why did you not take that action? (If they did undertake this, how did they do it and how was it successful?)

11. Did you consider complaining to officials who might be able to fix the problem? Why did you not do this? (If they did undertake this approach, how did they do it and how was it successful?)

12. Did you consider organizing with other people to complain about the problem? Why did you not do this? (If they did undertake this approach, how did they do it and how was it successful?)

If they took action of some form, ask:

13. Can you imagine a situation in which you would not have taken any action at all to deal with this problem? Please describe what that situation would be like.

If they admit a problem with the service and have taken no action, ask:

14. What factors kept you from taking any action?

15. Are there people who might disagree with your approach and your views about this? If yes, how and why would they disagree?
16. Is there anything else I have not asked about refuse collection that you would like to tell me about?

SECTION THREE: SEWAGE

**Grand Tour Question:** Can you recall a situation in which you experienced a problem with the sewage (sanitation) system in your home? You can think about it for a minute, and when you’re ready, go ahead and tell me what happened.

(Alternative one: If you can’t recall a situation like that, I wonder if you can relate a similar situation that you are aware of in which somebody else had problems with their sewage.)

(Alternative two: Then can you imagine having such a problem and tell me what you think you would do?)

**Follow up questions:** (If these aren’t in the story, ask to get answers to these)

1. So why do you think you did what you did?
2. Did your approach change over time? Why did it change?
3. What other approaches did you consider?
4. What kinds of approaches do you know of that other people have taken when they had problems with their sewage system?
5. Why did you reject the other approaches that you considered and those that others used? (If you need to follow up: What kinds of factors kept you from taking these other approaches?)
6. So how successful was your approach in solving the problem?
7. If you had it to do again, are there things you would do differently?
8. What is unique about you or your situation that explains why you took the approach you took?

If other EVLN approaches are not offered, ask the following:

9. Did you consider moving to another place where you think the sewage system is better? Why did you not take that action? (If they did undertake this approach, how did they do it and how was it successful?)
10. Did you consider seeking other means of fixing the sewage problem without moving from this location? Why did you not take that action? (If they did undertake this, how did they do it and how was it successful?)
11. Did you consider complaining to officials who might be able to fix the problem? Why did you not do this? (If they did undertake this approach, how did they do it and how was it successful?)

12. Did you consider organizing with other people to complain about the problem? Why did you not do this? (If they did undertake this approach, how did they do it and how was it successful?)

If they took action of some form, ask:

13. Can you imagine a situation in which you would not have taken any action at all to deal with this problem? Please describe what that situation would be like.

If they admit a problem with the service and have taken no action, ask:

14. What factors kept you from taking any action?

15. Are there people who might disagree with your approach and your views about this? If yes, how and why would they disagree?

16. Is there anything else I have not asked about sewage system in Abuja that you would like to tell me about?

Conclusion

(a) Could you suggest another person to interview?

(b) May I contact you again if I have further questions? Telephone ___________ email ___________

Thank you, I really appreciate your time and participation in the interview
APPENDIX B

Human Subject Approval

Use of Human Subjects in Research - Approval Memorandum

Human Subjects [humansubjects@magnet.fsu.edu]

Seal: Wednesday, May 11, 2011 11:43 AM
To: 
CC: 
Attachments:2011.5226 EC;pdf (55 KB)

Office of the Vice President For Research
Human Subjects Committee
Tallahassee, Florida 32306-2742
(850) 644-8673 • FAX (850) 644-4352

APPROVAL MEMORANDUM

Date: 5/11/2011
For: Ismaila Abubakar
Address: 162 Crenshaw Dr. Apt 8, Tallahassee, FL 32310
Dept.: URBAN AND REGIONAL PLANNING
From: Thomas L. Jacobson, Chair
Re: Use of Human Subjects in Research
Urban services provision and citizens responses in a modernist city of developing countries: A case study of Abuja, Nigeria

The application that you submitted to this office in regard to the use of human subjects in the proposal referenced above have been reviewed by the Secretary, the Chair, and one member of the Human Subjects Committee. Your project is determined to be Expedited per 45 CFR § 46.110(7) and has been approved by an expedited review process.

The Human Subjects Committee has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval does not replace any departmental or other approvals, which may be required.

If you submitted a proposed consent form with your application, the approved stamped consent form is attached to this approval notice. Only the stamped version of the consent form may be used in recruiting research subjects.

If the project has not been completed by 5/9/2011 you must request a renewal of approval for continuation of the project. As a courtesy, a renewal notice will be sent to you prior to your expiration date; however, it is your responsibility as the Principal Investigator to timely request renewal of your approval from the Committee.

You are advised that any change in protocol for this project must be reviewed and approved by the Committee prior to implementation of the proposed change in the protocol. A protocol change/amendment form is required to be submitted for approval by the Committee. In addition, federal regulations require that the Principal Investigator promptly report, in writing, any unanticipated problems or adverse events involving risks to research subjects or others.

By copy of this memorandum, the Chair of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols as often as needed to ensure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Human Research Protection. The Assurance Number is FWA00000148/IRB number IRB00000446.

Cc: Petra Doan, Advisor
FSU Behavioral Consent Form

Urban services provision and citizen responses in a modernist city of developing countries: A case study of Abuja, Nigeria

You are invited to be in a research study of the citizen experience of the provision of urban services such as water, refuse collection and sanitation by Abuja municipality. You have been selected as a possible participant because as a resident of this residential district, you may have rich information and ideas about this topic. We ask that you read this form and ask any questions you may have before agreeing to be in the study.

This study is being conducted by Ismaila Abubkar, a PhD candidate at the Department of Urban and Regional Planning, Florida State University, Tallahassee, Florida, USA.

Background Information:
The purpose of the study is to examine your experience of the performance of urban services provided by the municipality of Abuja. It sets to explore how satisfied are you with water, refuse collection and sanitation services. It is assumed that if citizens are dissatisfied with the services, they may use some coping strategies to deal with the inadequacy or low quality services.

Procedures:
If you agree to be in this study, I would ask you to answer a series of open-ended questions, which will take about 1 hour. To help me capture all your responses, may I find out from you whether you agree to a tape recording of this interview? If you don’t, I will do the recording with paper and pencil.

Risks and benefits of being in the study:
This study poses no risks greater than are encountered in everyday life. The only benefit for being in the study is that it is expected to lead to recommendations for policy making and planning that will benefit the whole society. Thus, there are no direct individual benefits.

Compensation:
There is no payment for participation in this study.

Confidentiality:
The records of this study will be kept private and confidential to the extent permitted by law. In any sort of report I might publish, I will not include any information that will make it possible to identify a subject. Research records will be stored securely and only the researchers will have access to the records, which will be used for the purpose of this study only. The records will be erased after this study is completed.

Voluntary Nature of the Study:
Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with the Florida State University. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

Contacts and Questions:
The researcher conducting this study is me, Ismaila Abubakar. You may ask any question you have now. If you have a question later, you are encouraged to contact me at the Dept. of Urban & Regional Planning, Florida State University, Tallahassee, FL 32306, USA or by phone at or by email. You may also contact my academic advisor Dr Petra Doan at the same location, by the phone number or the email address.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher and the academic advisor, you are encouraged to contact the FSU Institutional Review Board at 2010 Levy Street, Research Building B, Suite 276, Tallahassee, FL 32306-2742, or 850-644-8633, or by email at humansubjects@magnet.fsu.edu.

You will be given a copy of this information to keep for your records.

Statement of Consent:
I have read the above information. I have asked questions and have received answers. I consent to participate in the study.

__________________________    ________________________
Signature                      Date

__________________________    ________________________
Signature of Investigator       Date

REFERENCES


Devereux, P. J., & Weisbrod, B. A. (2006). Does “satisfaction” with local public services affect complaints (Voice) and geographic mobility (Exit)? *Public Finance Review, 34*(2), 123–147


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National Population Commission (NPC) (2009). Nigeria Demographic & Health Survey 2008, ICF Macro, Calverton, Maryland, USA


World Bank (1996). Restoring urban infrastructure and services in Nigeria. Africa region, report number 62


BIOGRAPHICAL SKETCH

Ismaila Rimi Abubakar

EDUCATION

Ph.D. Urban and Regional Planning, 2012
Florida State University (F.S.U.), Tallahassee, Florida, USA
Dissertation: Households’ coping strategies with unsatisfactory urban services in a planned city of developing countries: A case study of Abuja, Nigeria

Master of City and Regional Planning, 2007
King Fahd University of Petroleum and Minerals (KFUPM), Saudi Arabia
Master’s project: A framework for implementing a GIS-based Environmental Management System in KFUPM, Saudi Arabia

Master of Science in Computing: Software Technology, 2004
The Robert Gordon University, Aberdeen, United Kingdom
Master’s project: Fitting buildings on a site (I developed a software program for plot subdivision)

Bachelor of Urban and Regional Planning, 2000
Ahmadu Bello University Zaria (A.B.U.), Nigeria (Second Class Upper Division)
BS project: An analysis of the physical development of Sabon-Tasha, Kaduna, Nigeria

PUBLICATIONS

PEER-REVIEWED PUBLICATIONS


SUBMITTED ARTICLES


**TECHNICAL REPORTS**


Benna Associates (2007). Kaduna State University Master Plan for Kaduna and Kafanchan campuses, Nigeria. Submitted to Kaduna State University, Nigeria


**ARTICLES IN PREPARATION**

Abubakar, I. User satisfaction with refuse collection and sanitation services in Nigeria’s capital city, Abuja. For submission to *International Planning Studies*
Abubakar, I. Households’ coping strategies with water supply in Abuja city, Nigeria. For submission to Urban Studies

Abubakar, I. Households’ coping strategies with unsatisfactory refuse collection and sanitation services in Abuja city, Nigeria. For submission to Urban Affairs Review

PRESENTATIONS

Abubakar, I. (2012). Households’ coping strategies with unsatisfactory urban services in Abuja, Nigeria. Accepted for presentation at the Association of the Collegiate Schools of Planning 53rd Annual Conference, Cincinnati, November 1-4


Abubakar, I. & Aina, Y.A. (2006), GIS and space syntax: An analysis of accessibility to urban green areas in Doha district of Dammam Metropolitan Area, Saudi Arabia. Map Middle East conference, Dubai, UAE

AWARDS AND FELLOWSHIPS

Conference presentation grant by Population Reference Bureau, 1875 Connecticut Avenue, NW, Washington DC for presenting paper at paper at ACSP 52nd Annual Conference, October 2011($1,114)
Dissertation research grant by Population Reference Bureau (PRB), Washington DC ($2,000)
Fellowship by PRB to attend Policy Communication Workshop in Washington DC, August 1-12, 2011

Best policy brief title during the Policy Communication Workshop organized by Population Reference Bureau, August 2011

Partial postgraduate scholarship by Petroleum Technology Development Fund, Nigeria for the study of PhD in Urban and Regional Planning at Florida State University, Tallahassee, USA, 2008–2012

Financial assistantship by the department of Urban and Regional Planning, Florida State University, Tallahassee, for Ph.D. program, 2008 – 2012.

Dean’s award, College of Social Sciences, Florida State University, 2008-2009 session ($1,000)


Commendation by National Youth Service Corps, Nigeria for hard work, dedication, exemplary performance and high level of achievements during national service, 2000

First position awards at Garama Primary School, Katsina and Government Secondary School Mani, Nigeria

RESEARCH EXPERIENCE

Research Assistant, department of Urban and Regional Planning, F.S.U. 2008-date – worked with Dr. Petra Doan and under Florida Planning and Development Laboratory.

Research Assistant, Department of City and Regional Planning, KFUPM. 2004-07 – worked on several projects funded by King Fahd University of Petroleum and Minerals, Saudi Arabia.

TEACHING EXPERIENCE

INSTRUCTOR AND TEACHING ASSISTANT AT FSU

- URS1006: World Cities Summer C, 2010 and 2011, Instructor
- URP5847: Growth and Development of Cities, TA with Dr. P. Doan, Fall 2011
- URS1006: World Cities, TA with Dr. N. Jung, Spring 2009
- URS5610: Introduction to Planning for Developing Areas, TA with Dr. I. Audirac, Fall 2009
• URS5201: Methods of Planning Analysis (Research Design), TA with Dr. H. Gibson, Spring 2010

**CO-INSTRUCTOR AT KFUPM, SAUDI ARABIA**

• Introduction to GIS Technology and its Applications (one-week short course), December, 2004 with Dr. B. Ramadhan
• Introduction to ArcGIS 9.0 (one-week short course), May, 2005 – with Dr. B. Ramadhan

**LECTURER AT AHMADU BELLO UNIVERSITY ZARIA, NIGERIA**

• URPL205: Urban Land Use Components (Fall, 2002 & 2003)
• URPL305: Landscape Planning (Fall, 2002 & 2003)
• URPL306: Rural Settlements Planning (Spring, 2002 & 2003)
• URPL 311: Planning Model Making (Spring, 2002 & 2003)

**HIGH SCHOOL TEACHER IN NIGERIA**

• Geography teacher at St Patrick High School Ikom, Cross Rivers State, Nigeria 2000-2001 (National Youth Service)

**TRAINING WORKSHOPS ATTENDED**

• Policy Communication Workshop organized by Population Reference Bureau, Washington DC, August 1-12, 2011
• Program of Instructional Excellence organized by Centre for Teaching and Learning, Florida State University, August 18-20, 2009
• Effective Teaching and Lecturing Workshop organized by Teaching and Learning Centre, Deanship of Academic Development, KFUPM, Saudi Arabia, November 12-14, 2007

**PROFESSIONAL EXPERIENCE**

**GIS ANALYST AND SENIOR TOWN PLANNER**

Benna Associates Limited, Nigeria – a planning consultancy firm – from October 2004 to June 2008

**STUDENT’S INTERNSHIP**

Katsina Urban Planning and Development Authority, Katsina, Nigeria, May - November, 1998
PROFESSIONAL MEMBERSHIP

- Policy Fellow, Population Reference Bureau
- Member, American Planning Association
- Member, African Studies Association
- Member, Nigerian Institute of Town Planners

COMMUNITY SERVICES

- 300-Level Students' advisor, Urban and Regional Planning department, Ahmadu Bello University Zaria, Nigeria, (2003-2004)
- Class Monitor, Garama Primary School, Katsina, Nigeria (1983-1985)
- Member, undergraduate program curriculum review committee, URP department ABU Zaria, Nigeria (2002-2003)
- Member, Department of URP and College of Environmental Design Faculty boards, ABU Zaria, Nigeria (2002-2003)
- Member, Ahmadu Bello University website development committee - representing URP dept (2002)

COMPUTER SKILLS

ArcGIS, AtlasTi, AutoCAD, STATA, SPSS, MS Office Suit, Adobe Dreamweaver, Adobe Illustrator, Website Design, and Hardware (computers, printers, plotters, scanners, GPS, digital cameras)

LANGUAGES

Fluent in English and Hausa languages, fair written and spoken Arabic

COUNTRIES VISITED

United States of America, United Kingdom, Netherland, Saudi Arabia and Egypt

HOBBIES

Tourism, soccer and reading novels