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The Effectiveness of the New Town Policy in Managing Growth and Congestion in Mega Cities: A Case Study of Lagos, Nigeria New Town Policy

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THE EFFECTIVENESS OF THE NEW TOWN POLICY IN MANAGING
GROWTH AND CONGESTION IN MEGA CITIES: A CASE
STUDY OF LAGOS, NIGERIA NEW TOWN POLICY

by

Abolaji Samson Olanipekun

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Abolaji Samson Olanipekun, M.A.

Western Michigan University, 2013

One of the major challenges facing municipal governments of megacities in developing countries is shortage of urban infrastructures relative to population growth. Because cities play important role in the economic development of every nation, problems confronting them require proactive policy measures by the government. One such mega city is Lagos, Nigeria. From 1962 to 2006, the population of Lagos grew from 1,135,805 to 17.5 million. Crammed on a 2200 square kilometer land area of which 18.9%, Lagos population is projected to reach 20.5 million by 2015, an explosion largely driven by the non-regulatory internal migration system. The result of this has been a persistent problem of housing crisis, vehicular congestion, environmental pollution and the spread of slums with the associated high crime rate. In 1981 the Lagos State New Town Development Authority (NTDA) was established to create new towns in order to manage the growth of Lagos and decongest the metropolitan area. This idea was borrowed from the UK, among other countries. The history of new town development globally has been that of a mixed outcome and the three decades of new town development in Lagos has also not produced any real impact on infrastructural development and spatial socio-economic equity in Lagos. The central question of this project therefore is to what extent has the Lagos new town project solve the infrastructural and congestion problems confronting Lagos mega city? Survey was designed to get the opinion of the Lagos new towns residents about the effectiveness of the new town policy. Outcome of the analysis shows that three decades of new town development efforts has not helped to achieve spatial socio-economic equity, decongestion and infrastructural adequacy in Lagos.

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CHAPTER I

INTRODUCTION

The Problem

One of the significant developments in human settlements over the last four decades has been the growth of mega cities. Mega Cities are urban agglomerations with inhabitants of 10 million people or more. In 2012, the United Nations reported that there were 10 times more people living in mega cities in 2011 than in 1970 and projected that the number of people living in mega cities will skyrocket in 2025 to reach an all-time high of 630 million from the current number of 359.4 million – that is almost double within a 14 year period (UN 2012).

When put in historical perspective, the growth of mega cities is indeed a worrisome situation, especially considering the fact that many of these cities are located in developing countries that do not have adequate infrastructure and resources to cope with such growth (Pacione 2001). For example, in 1950, Tokyo, Japan and New York, USA were the two mega cities that existed. Two decades after, in 1970, the number had grown to 10 cities and 5 out of these were located in developing countries. As of today, there are a total of 23 mega cities around the world, and 18 out of these are in developing countries. Also by the year 2015, the United Nations has projected that there will be 37 mega cities, 30 of which will be in developing countries (UN 2011). This is a clear indication that cities in developing countries are more rapidly becoming large urban agglomeration than those in developed countries. Knox and McCarthy (2011) reported that 90% of the entire 2.2 billion increases in world urban population since past four decades took place in developing

countries. This is in spite of the gross infrastructural inadequacy of these countries to support the growing urban population.

One of these megacities is Lagos, Nigeria. From 1962 to 2006, the population of Lagos grew from 1,135,805 to 17.5 million, and it is projected that the population will reach 20.5 million by 2015 (Olokesusu 2011; Nwokocha 2007). This makes Lagos Africa's fastest growing megacity. Lagos' situation is made worse by the fact that this large population is crammed on a 2200 square kilometer land area of which 18.9% is wetlands. Lagos State Ministry of Housing (2010) reports that the population density within the Lagos metropolitan area is about 20,000 people per square kilometer and the occupancy ratio is 8-10 persons per room. This along with the non-regulatory internal migration system in Nigeria makes Lagos Africa's most congested city (Nwokocha, 200; Mabogunje, 2008).

This growth has resulted in a host of problems including poor living condition, severe traffic congestion, crippling mobility, unhealthy sanitary conditions and rapid development of slums (Mabogunje 2008; Pacione 2001). These problems have naturally attracted a search for effective policy responses. One of such policies is the new town policy, which started in the United Kingdom after the Second World War. Since then and until now, many other nations like France, the United States, Egypt, China and Nigeria have adopted the concept as a tool of dealing with over-urbanization and the outcome in all cases has been mixed (Pacione 2001).



Figure 1.1: Congestion Situation in Lagos (Source: Mobereola, D. 2009)

Lagos adopted the new town policy to manage the planned growth of the city with the establishment of the Lagos State New Town Development Authority (NTDA) in 1981. The NTDA was established by the Lagos State government to oversee the development of new towns across all axis of Lagos, decongest metropolitan Lagos, and ensure even development throughout the State. Since then, many sites have been identified, designed and allocated for development

and many of these have been fully completed and inhabited while others have been abandoned or encroached upon by local residents.

In the meantime, it appears that congestion in Lagos, uneven development and other problems that the new town policy was meant to solve still continue. Thus, questions remain as to the effectiveness of this policy in dealing with the problems of the Lagos Mega City; yet no study has been conducted on the subject.

Purpose

The purpose of this thesis is to evaluate the effectiveness of the new town policy with particular reference to Lagos. Specifically, the study will evaluate the extent to which the new town policy has addressed

- the congestion problems
- cost of living and housing affordability;
- improved infrastructure;
- dependence on the central city for jobs

The study will also offer recommendations for policy changes and future research.

Significance of the Study and Expected Outcome

Given the fact that the new town policy in Lagos has generated mixed outcome, it is expected that this research provide insight into whether or not the new town policy is a viable alternative policy solution to Lagos mega city's problems. It will also shed light on aspects of the new town planning process that may require modification for optimal result. Also, the study will highlight how theories of urban growth can be used to better understand Lagos mega city's problems. More importantly, at the time of this research, no research has been done about the Lagos new towns policy. Hence, this study is intended to pioneer intellectual discussions around the Lagos new town policy. The outcome of this study will also be a reference point for future Urban Planning policy and research.

Research Methodology

Primarily, data for this research was derived from the household survey conducted by the researcher in the summer of 2012. Among the existing Lagos New Towns that were surveyed are Lekki Phase I, Magodo Government Reserved Area (GRA) and Ikorodu GRA respectively. Survey questions were handed to the residents by a representative of the Resident's Association of the respective estates, the residents completed the survey independently and returned them to the researcher through the estate representatives from whom they got the questionnaire. Survey questions were divided into three categories, first were the demographic categories to understand

the demographic characteristics of respondents and how they impact the findings, second were infrastructure related questions based on the perception of respondents about the infrastructure situation in their estates and third were new town specific questions to examine the perception of the respondent about the new town policy and its impact.

Survey responses were coded and summarized numerically and entered into a spreadsheet. Data was analyzed using SPSS software. Crosstab analysis was conducted but because too many expected counts fell below 5, the study mostly analyzed the data using proportions. The results of these analysis were also compared with the household survey that was conducted by the Lagos State Ministry of Budget and Planning in 2010 to establish if there are any trends in terms of congestion and the state of infrastructures in areas around the surveyed sites.

Study Area

Lagos is a coastal city situated within latitudes 6°23'N and 6°41'N and longitudes 2°42'E and 3°42'E (Oduwaye, 2009). The Lagos metropolitan area is made up of islands separated by creeks and on the fringe southwest to the mouth of Lagos lagoon. The city is shielded from the Atlantic Ocean by long sand spits that stretches about 100km East and West of the Ocean mouth.

Today, the City of Lagos is the dominant metropolis of the Lagos State, which is the smallest state in terms of areas in the Nigerian Federation, but ironically the largest state in terms of population, not only in Nigeria but in any black nation on earth. It is also Africa's fastest growing mega city. Lagos state occupies an area of 3,577 square kilometers, about 22% of which is made up of water (lagoon, Atlantic Ocean and creeks). The entire 3,577 square kilometers land area of Lagos State represent only about 0.4 percent of the total land area in Nigeria, and Lagos state houses almost 10 percent of the country's population. Out of the total land area of the state, the Lagos metropolis covers an area of 2200 square kilometers, 18.9% of which is also wetlands. Of the population of over 20 million people living in the state of Lagos, about 91% live in the metropolis thus making Lagos city the most congested mega city in Africa. Figure 1.1 is a map showing the major communities in the metropolitan Lagos, the wetland areas and the locations of seaports. The maps also shows that substantial part of Lagos land area are wetlands, a factor that further limits the ability of the mega city to provide affordable housing for the teeming population.



Figure 1.2: Map of Metropolitan Lagos (source: www.Lagos.gov)

Thesis Organization

The rest of the thesis is divided into four chapters; each focuses on specific aspect of the research. Chapter 2 is the review of relevant literature and dwells on prevailing issues in urban growth. Specific topics in this chapter include: theories and historical perspectives of urbanization, pattern of urban growth in Africa and general problems of urban growth and their solution, the role of the city in National economic development, a brief history of the New Town Policy and specific focus on the Lagos Nigeria new town development project; its objective, development framework, successes and challenges. Chapter 3 is devoted to the methodology of the study and chapter 4 focuses on data analysis and discussion. Chapter 5 summarizes the study and presents conclusions and recommendations.

CHAPTER II

LITERATURE REVIEW

Introduction

This chapter places this thesis in context by reviewing the literature relevant to the topic. In both urban geography and planning, this extensive literature has generally focused on a wide range of topics, but the ones that will be relevant to this thesis are those that focus on the role of cities, theories of urban growth, historical pattern of urban growth, problems of urban growth and how those problems are being solved.

The Role of Cities

The role of cities in national development has long been recognized in urban studies. In particular, they have been described as the spaces where the mobilization of manpower for industrial and economic development takes place most efficiently (Hoselitz 1953, Friedmann 1969, UNHABITAT 2012). According to Hoselitz (1953 203) “Commerce, financial institutions, industrial establishments, governmental bureaucracies, and advanced educational and intellectual training facilities all require an urban climate to develop and flourish.” For Hoselitz, it is only in cities and towns that employers can find reliable and committed industrial workers which possess requisite skills and expertise that are consistent with changing technologies of the modern age. Large cities are also especially more advantageous for the location and expansion of nonagricultural enterprises with greater variety of skills and occupational expertise.

Hoselitz also stresses the sociocultural roles of cities. He observes that in many parts of the world, people's folk-like cleavages – that is their strong attachment to traditional values— always runs contrary to their aspiration for economic growth because traditional values in many instances are in opposition to the forces that engender economic growth. Cities and larger urban centers on the other hands, even in the underdeveloped countries are more receptive to new ideas and better ways of doing things that enable them to introduce and adapt to new technologies, new consumption and production patterns as well as new set of social institutions.

As seats of academic, administrative, political and cultural institutions, cities also serve as centers of interaction among the elite residents and the institutions they represent. These kinds of class relationships prompt intellectual engagement and foster development of new set of occupational expertise. This increases the stock of skilled man power available for industrial jobs, and thus increases economic activities. It also leads to the formation of economic organizations which allow for the exploration and the establishment of new economic activities and consequently economic growth.

Friedmann (1969) also asserts that innovation, social transformation and political transformation which are the three basic processes of development are closely linked to the urbanization process. The urbanization process tends to reinforce developmental change through increasing communication, enhanced interconnectedness and a change in the pattern of social organization. Because of their ability to generate economies of scale and agglomeration through efficient

transportation system, communication and infrastructural services, large market for goods and services, social interaction, heavy presence of skilled labor and specialization, cities have produced unprecedented gains in productivity and competitiveness (UNHBITAT 2012).

Friedmann (1969) based the role of the city in national economic development on four fundamental hypotheses:

1. The frequency of invention is positively correlated with a high potential for interaction, that is, a high probability of information exchange or communication. The highest frequency of information exchange and new idea combination can be found in the large cities.
2. Urbanization will positively vary with the probability of communication at any given locality and as cities are joined into systems, the probability of information exchange among them will increase. Linkages among cities systems and their subsystems are stimulus for growth and the potential for communication is exemplified in these linkages.
3. The frequency of innovation in a given locality is a function of its internal structure of social power. If the city operates in a rigid, tightly controlled bureaucratic system, innovation and development will be slow. On the other hand, innovation is better accelerated in an open non-bureaucratic city system with wide range of power structure that can accommodate innovation and growth.

4. An increasing openness of the system of social power leads to an increase in the frequency of innovation and produces a new and improved way of life that benefits the entire society, thus a positive role of city in national development.

There is therefore a positive relationship between cities and economic growth. Cities play vital role in the economic development of societies and they are the embodiments of what represent a vibrant economy (UNHABITAT 2012). While it is possible that a country experience rapid urban growth even in the absence of economic growth such as the case with the developing countries of Africa and Asia, evidence still shows that most of the largest cities in the world are the world's largest economies. For instance, UNHABITAT reported that the top 100 largest cities in the world could account for 35% of the total global GDP and that the productivity per capita is higher for cities than rural areas in developed countries. Hence, the overwhelming importance of cities has positioned them as harbingers of hope for growth and opportunities in our societies (UNHBITAT 2012).

Theories of Urban Growth

Clark (1982) refers to urban growth as a process that has both spatial and demographic dimensions. Urban growth takes place in a society when the movement of the people changes the structure of that society from a village –based economy to a city –based economy. Urban growth is measured by comparing the population of city dwellers to the total population and when the proportion of urban population increases relative to total population, urban growth is said to have occurred.

Theories of urban growth provide explanations of how cities grow both geographically and sociologically. According to Clark (1982) there are two general explanations: economic and sociological. These two explanations have been extended in terms of their specific applications to developing countries.

Economic Explanations

The economic explanation is provided by the economic base theory. The theory divides the local economy into two sectors – the basic sector or export activity and the non-basic sector. The growth of cities is attributed to the activity of the basic sector which is inherently export-oriented and attracts more activities because of several advantages the activity brings to the city. Among these are local competition, production efficiency, information exchange, human capital transfer and spill over among firms that culminate in attraction of other activities that eventually change the structure of the city (Black and Henderson 1999). Thus the economic explanation of urban growth asserts that areas with the most potential economies of scale will attract more settlers than areas with less economies of scale.

Myrdal (1957) in his theory of cumulative and circular causation provides an example of how economies of scale can change the structure of the city in practice and within the context underdeveloped regions. According to Myrdal, the location of an industry in an underdeveloped region creates multiplier effects such that the existing industry attracts more commercial and industrial activities along with the expansion of the service sector. Myrdal (1957) argues that these multiplier effects are two types: the spread effects and the backwash effects. The spread effects are

supposed to affect other regions positively by bringing growth to other regions of the country, while the backwash effects affect other regions negatively, by preventing them from growing. However, as a result of the process of circular and cumulative causation, the backwash effects are stronger, thus they end up siphoning development of other regions.

Pred (1977) expanded on Myrdal's theory and classified the multiplier effects into primary and secondary multiplier effects. The primary multiplier effect is a result of initial construction and industrial location which essentially generate new services and employment opportunities and thus change the population structure of the city. These industrial activities will engender more innovation and invention thus increasing potential for further expansion of existing industries and the emergence of new ones. Also the secondary multiplier effect, which is triggered by the increased industrial activities will activate further expansion of industries, services and increase in population along with an alteration in the structure of the city through the combine effect of the new and existing industrial plants and services in the city. This circular process of industrial location, service expansion and population growth is self-reinforcing and continue on and on with cities growing uncontrollably and the villages shrinking helplessly (Clark 1982).

Similarly, Walter Christaller in his central place theory attribute process of urban growth to economic benefits that associate with industrial or residential location choices made by individuals who he believed to be rational in their decision making. The bottom line then is that

areas with the most potential for greater economies advantage will naturally attract more people. (Clark 1982).

Pacione (2001) identifies natural urban population growth and net migration from the villages as mutually reinforcing factors for urban growth. This is similar to the economic theory of urban growth which teaches the doctrine that people assemble in the city because they are in search for the most economical form of settlement. According to Pacione (2001), access to land for the purpose of food surplus was the motivating factor in the primitive economy where agriculture was the dominant economic activity. Then, the larger cities were those with higher food surplus. As the economy expanded and attention shifted from agriculture to craftsmanship, people began to congregate in areas that gave them economic advantage. As the cities attracted more and more people, economies of scale helped the expansion of various crafts into small, medium and large scale industries having high demand for external raw materials. Access to external raw materials then became an important force driving urban growth.

Sociological Explanation

The sociological explanation of urban growth attributes urban growth to interpersonal ties that exist between people, which in turn move them to live in close proximity to one another (Clark1982). The proponents of this theory use the analogy of complementary human relationship such as male-female, mother-child, and sender-receiver and so on to explain the cohesive tendencies in human population. According to the sociological theory, the emergence of cities is simply a product of the development of social institutions and mechanisms that allow people to

live together in a sizable concentration. Clark (1982) attributes the communication theory of urban growth to Meier (1962). In that theory, Meier regards cities as mere facilitators of social bond. He argues that people live in close proximity because proximity enhances interpersonal communication and ties. Put simply, the capability of the city to facilitate a complex pattern of information exchange and generate civic bond among people creates urban growth. Thus as communication technology changed, the city form also changed from compact to dispersed.

Historical Pattern of Urban Growth

The preconditions for urban growth incorporates all the elements of civilization at different stages of societal development such as agricultural revolution, foreign trade, technology, transportation, industrialization, population pressure and their impact on the spatial and demographic structure of the society (Clark 1982; Knox and McCarthy 2011). Towards the end of the nineteenth century, the only regions that had achieved significant urban growth were Britain, North-West Europe and the USA. At that time only 3 per cent of the world population lived in cities. Since then, the pace of global urban growth has been very alarming. For example, in 1950, only 30 per cent of the world's population was urbanized with only 75 metropolitan areas having one million population or more and 6 with 5 million or more. By the year 2010 however, this number had increased geometrically to 442 urban areas on the one million population mark with 54 housing over 5 million people (Knox and McCarthy 2011).

Perhaps the most significant trend in contemporary urban growth pattern is the dramatic shift between developed and developing countries with developing countries of Asia, Africa and Latin America having the bulk of the fast growing cities in the world. For example, in 2011, there were

23 mega cities around the world and 18 out of these were in developing countries (Knox and McCarthy 2011; UN 2011).

The shift which began in the mid twentieth century is the rising level of urbanization in Africa and the Middle East which were predominantly rural prior to the 1960s. These developments have raised question as to whether the theories of urban growth that were developed from the experience of developed countries can really explain the trend in developing countries.

Pacione (2001) observes that the pattern of urbanization in developing countries differs from the one that took place in developed countries in a number of respects:

- Industrialization: the pattern of urban growth in many developed nations is largely as a result of industrialization and economic growth. This is not the case with less developed countries
- Demographic Transition: as opposed to the situation in industrialized countries, urbanization in less developed countries has followed a demographic pattern with higher birth rate and lower death rate.
- Rural Urban Migration: driven by the desire for improved living condition and access to basic services like job, education, healthcare in the cities. Village dwellers, almost unaware of the declining social conditions in the destination cities, out-migrate to larger towns and cities for a prospect of better life. Knox and McCarthy (2011) observe that the less developed countries have attracted nine out of ten of the entire 2.2 billion increases in world urban population since past four decades.

Rural-Urban Migration

Rural-urban migration is one dominant factor that has reinforced urban growth in developing countries. As capital cities in developing countries became centers of commercial and political activities and offer prospects of employment and higher wages, those cities quickly attract migrants from the country side with rapid urbanization as a result. Several models have been advanced to explain the causes and implications of rural-urban migration to the growth of the cities.

One of the most cited models is the Todaro model which explains that wage differential between the city and the rural areas will naturally cause people to migrate to the city in search of employment and higher wages. This theory is based on the assumption that rural migrants are risk-neutral agents and will consider expected wages and job prospect in the city before moving (Zenou 2007). Byerlee (1974) examines what Todaro refers to as the paradox of unemployment that results from the net negative effect of migration from the villages and found that people in search of higher wages and employment prospects will continue to move to the city and eventually outnumber the available urban jobs thus creating a paradox of unemployment. This theory is intended to alert developing countries of the unintended negative consequences that governments' urban employment policies may create if there are no appropriate deliberate population control measures to compliment these policies.

Urban growth in many developing countries in general and African countries in particular has followed the pattern of rural-urban migration such as described by Todaro. For example, the main causes of urbanization in Nigeria as noted by Nwokocho (2007) are the non-regulatory internal

migration system which allows for an uncontrolled in-migration of people from one place to another within the country and the associated unpreparedness of the receiving urban destination to the potential structural and socio-economic imbalances that could result. The resulting over urbanization has escalated the burden that rural-urban migration placed on the Population in most urban centers (Mabogunje 2008).

In a survey conducted between 1962 and 1963, Caldwell, (1969) finds that rural Ghanaians perceived migration to towns as a force for economic development. Migration from rural to urban areas was seen as a way of improving households' economic status and once one member of the rural household exits and begin to remit money to the family members, the propensity to migrate increases among the remaining members of the household to join him in the town thereby creating a chain of migration. According to Caldwell, because the rural economy is based on subsistent agriculture and land based activities that are not producing enough to meet families' needs; the villages exerts what Caldwell calls a "rural push" on its dwellers that force them to exit the villages and migrate to the town. The urban areas on the other hand exert an "urban pull" due to the cultural belief that rural-urban migration will increase the economic wellbeing of the household and because already some members of the household that migrated have been remitting monies to their families in the villages.

Baker and Aina (1995) on the other hand suggest that beyond the economic reasons for rural-urban migration that is so widely discussed in the literature, cultural factors play a key role in rural-urban migration in Africa. To them cultural factors such as land tenure system and mode of production are at the root of economic crisis of many rural families in Africa. The inequality in entitlement to lands and assets forces most rural farmers to over-cultivate their limited land resources. The result

is land degradation and the eventual inability of the land to meet the households' food needs. This situation tends to force the families to seek alternative survival strategies. Baker and Aina (1995) classify these survival strategies into two types:

1. Multi-active household strategy: here, members of household engage in different income generating activities that are either land-based or service-oriented both in the cities and in the villages at the same time in order to increase families income stream
2. The secluded group strategy: this is regarded as the dominant strategy in most African villages where people simply migrate to the cities in search of an alternative way of life different from what is obtainable in the village. It is evident that the pattern of rural urban migration in Africa consists of both economic and socio-cultural factors that do not suggest that most of the urban destinations were in any way ready to absorb the influx of rural migrants.

As shown by Caldwell's survey, while these migrants still consider their ties to the villages from where they initially migrated to the city as very important, many of them expressed no desire to return permanently to the villages. Hence as more and more people exit villages every day and former migrants fail to return, the urban population density begins to build up thus constituting huge strain on infrastructure and leading to the breakdown of social and economic order in the city (Caldwell, 1969).

Nwokocha (2007) identified poverty, unemployment and ignorance about the capacity of urban infrastructure to support the life of the population as major factors responsible for out-migration from rural to urban areas in Nigeria. Many young men and women migrate into the cities in an

attempt to escape impoverishment and powerlessness that characterizes life in the rural areas and in search of jobs and city life. The result is what Nwokocha (2007) called “an unbearable population density” leading to a huge strain on urban infrastructure which are generally not adequate even to support the original dwellers of the cities. Naturally one would expect nothing short of housing crisis, vehicular congestion, environmental pollution and the spread of slums with the associated high crime rate under such circumstance.

To Tan (2010), the shared benefits (economies of scale) and costs (diseconomies of scale) associated with life in the city is at the center of urban agglomeration. The higher the benefits, the higher the urban population and as the population increases, the benefits begin to decline while costs begin to rise, due to excessive demand on urban infrastructure. Rising cost relative to benefits however does not necessarily lead to decline in urban population but congestion and its attendant hardships that characterize most inner cities, especially in the developing countries of Africa. These hardships inadvertently will necessitate the government to create policies that will address the problems and alleviate congestion.

Problems of Urban Growth

Rapid urban growth are usually accompanied by severe problems including urban sprawl, slum formation, rising crime rate, inadequate housing, lack of urban services and declining living conditions along with persistent problem of environmental degradation, high unemployment rates and poverty (Knox and McCarthy 2011; Maseland & Kayani 2010). In Africa, the growth of cities has equally generated many problems at a more severe scale than those in developed countries. Essentially, these problems have been escalated in Africa because the pattern of urban growth in

the region has largely been motivated by rural-urban migration rather than economic growth (Caldwell, 1969). As a result, poor housing quality, rising slums and informal settlements, inadequate infrastructure and basic services such as water and electricity, crime and poverty have further defaced African cities and have brought untold hardships on the inhabitants (Stewart, 1996).

Knox (2011) identifies shortages of essential resources as a common feature of that has escalated the problems of cities in Africa and other developing countries. According to Knox, a five-minute shower by one person in the United States will take more water than a person in a developing country will need for a whole day. In many places, the governments provide tap water but these are not sufficient to cater for the needs of the huge population. The quality of the water is another course for concern. In India for instance, about 7 billion gallons of untreated wastewater reportedly runs into public rivers.

Specifically, the three most pervasive of all urban problems that have become so endemic and common to both developed and less-developed countries are:

- **Poverty:** Inadequate public service deliveries, unemployment, corruption, are among the problems that have made urban dwellers worse off and keep them in poverty. Lack of access to education, poor health condition and degraded environmental resources has made it even more difficult for people to improve their economic status. Knox (2011) recognized that high rate of terrorism in the cities in most part are results of impoverishment. And despite the fact that African cities generate 55% of the total GDP in the continent, an overwhelming 43% of the city populations still live below poverty line and food price is on the increase because urban food demand is spiraling and food

production capacity is shrinking. UNHABITAT reported that 50 percent of West African city dwellers live in poverty (UNHABITAT, 2008). In Africa, poverty is perhaps the central problems of most cities as it is both the cause and consequences of several other urban problems.

- **Inadequate Housing:** Modern cities are characterized by people living in spatially separate enclaves with protected neighborhoods of wealthy class on one hand and dilapidated vulnerable low income neighborhoods on the other. This kind of urban fragmentation is self-perpetuating in many African cities (UNHABITAT, 2008). In many cases, government provide low-cost housing as an affordable housing alternatives for low income families but the inadequacy of this is seen in the larger number of urban population still living in the slums and squatter settlements. In places where people live in rental houses, the fewer job opportunities and wages that are not commensurate to amount of work make it even harder for many to afford paying their rent. Many who have been evicted from their homes because of this singular reason ended up seeking asylum in the informal sector thus increasing in the number of slums Knox (2011). Reilling, 2007 in the Journal of American Medical Association (JAMA) pointed to a hundred years of housing problem in Berlin Germany where the number of people per room increased by 6 per cent in one decade between 1890 and 1900 and majority of the housing lacking basic sanitary facilities. The journal directly linked housing problem to the health of city dwellers. This is an indication that the housing problem in the cities is an age-long one and is yet to be resolved in many places. In Ghana West Africa, evidence suggest that over 54% of the household heads in Accra areas expressed dissatisfaction with their housing due to lack of privacy, lack of

adequate facilities and facility-sharing, poor sanitation and harassment from landlords. In most of these neighborhoods, 72 to 75 per cent of all households share one each of toilet, kitchen and bathroom with their landlords' and/or co-tenants households (Konadu-Agyemang 2001).

- Inequality: At all spatial scale (urban and rural) in Africa, there is high presence of social, economic and environmental inequality, but inequalities within African cities are higher than within cities in other parts of the world “*The unfolding pattern is one of disjointed, dysfunctional and unsustainable urban geographies of inequality and human suffering, with oceans of poverty containing islands of wealth. Socio-economic conditions in African cities are now the most unequal in the world. This situation threatens systemic stability, affecting not only the continuity of cities as socio-political human ecosystems but also the entire nations*” (Maseland & Kayani 2010 p 2). UNHABITAT’s State of the World’s Cities Report of 2010/11 used the GINI coefficient to measure inequality in the world and many of the African countries fall in the extremely high inequality bracket. For instance countries like Kenya, Nigeria, Botswana and Zimbabwe and Ethiopia had scores ranging from 0.500-0.599, which is considered to be very high inequality. Worst still Namibia, South Africa and Zambia had even extremely high inequality scores that ranged from 0.600 and more. To put in perspective, Coefficients above 0.400 are regarded as a source of concern (Maseland & Kayani 2010).

The widespread informal sector of the economy has made it difficult for municipal governments to provide basic services for urban population in developing countries. Many believed that the “non-tax paying” sector is short-changing the economy, making it impossible for the government to meet the basic services needs of the urban population (Orfield 2002). These problems have obviously led to many attempts by national and local governments to search and implementation policies and measures to alleviate these problems. The next section reviews the literature on these efforts at finding solutions.

Attempts to alleviate the Challenges of Cities

As a result of the important roles that cities play in the economic and political wellbeing of many nations, the problems confronting these cities can never be neglected. In the past decades, there have been aggressive campaigns by professional organizations, civil right movements and other stakeholders towards a renewed approach to urban development in a way that addresses the many problems of the cities.

KÖTTER (2004) emphasized that factors that characterize mega cities are the same factors that explain the preponderance social and environmental risks that are common to them. He identified density, dynamics, risks and vulnerability as well as governance as parts of the characteristics of a mega city. He maintained that these factors also present opportunities that have to be balanced with the risks through effective policy measures that can improve the livability of mega cities.

In recognition of the need to reform urban planning to meet the needs of the contemporary urban population and ensure a sustainable planning practice, the UN-HABITAT has held series of discussion and proposed numerous policy alternatives that can guide urban policy/decision

makers in building sustainable cities. Among such recommendations are the ten principles of new urban planning which was introduced at the 2006 Third World Urban Forum in Vancouver. These principles, which include the promotion of sustainable planning, pro-poor planning, and integration of planning with budget as well as involvement of stakeholders in planning process, are aimed at helping planners and the government in developing countries to refocus their planning agenda on sustainable development, UN-HABITAT (2010).

Also, as a response to the problems of urbanization, governments have tried different approaches and scholars have recommended different alternatives some of which have succeeded, and some which have failed. For instance, the two recent urban development methods that China has adapted to control urban sprawl are “development zones and semi-urbanized villages” The semi-urban villages where population expansion takes an urban form but development takes a typical village form according to Deng and Huang (2003), are characterized by sprawling migrant enclaves – majority of who work in the cities and enjoy urban life, illegal construction into villages from the urban fringes that gradually develop into a ghetto-like community. This has left the municipal governments with a preponderant burden arisen from crime, illegal construction and the health implication that they impose on the communities. This practice has been described as “leapfrog development at macro level” (Deng & Huang 2003 p.211).

KÖTTER (2004) recommends a shift in urban planning policy and strategies for the development of modern mega cities as they are increasing in number and importance to the global economy as one way of achieving a sustainable urban system. Such strategies will include improvement and access to social services, mixed housing schemes that combines a self-help housing improvement with land access, public involvement in community development effort and registration of

informal settlements. In the United States and Canada, emphasis has been the need for sustainable urban development in its environmental and socio-economic dimensions, which entails participatory planning, sustainable and minimal use of renewable energy, solid fiscal base and migration control with emphasis and basic human rights, Knox and McCarthy (2011).

Bertaud and Malpezzi (2003) emphasize the importance of a coherent policy focus that will ensure city growth that is consistent with spatial development and adequate infrastructure. They reasoned that lack of political consensus or a clear vision on spatial development will render land use regulations and infrastructure investments inconsistent and contradictory in the face of ever-changing spatial structure of the city. They therefore recommend that municipalities monitor the spatial trends of development and take regulatory remedial action if this trend contradicts municipal objectives.

The Emergence of the New Town Policy

One of the ways some developed countries' governments dealt with urban growth problems after World War II was a deliberate policy to decentralize cities by creating new towns to move people out of the industrial towns. The idea was to create a better living condition devoid of the hardship of the densely congested inner cities and thus attract people to relocate thus allowing the rebuild of the older cities to lower densities. It was also an attempt to promote a new kind of urban architecture and planning in a way that engender sustainability. There was a massive demolition of older structures and slums in the inner cities, in order to build newer and modern housing estates. (Alexander 2009)

Definition of New Town/Satellite Town

Very little of the existing literature on new town development is devoted to or at the very least attempt to define the concept. However, the ones that attempt have focused the definition of new towns on their size, their purpose, proximity to and/or relationship with older cities. For example, Tan (2006) defined new towns as small cities specifically built around larger cities with the sole intent of dispersing the overcrowded population from the larger cities. He further highlights the different kinds of new towns that have been built in different countries around the globe.

According to Tan, new towns may include

- Independent new towns that are separate from any older city
- New communities or bedroom communities with incomplete functions
- New cities located side by side with larger cities with functions similar to those of larger cities.
- New towns that are like satellite cities built at the periphery of the inner cities and accessible within short distance from the inner cities. These cities are usually smaller in size compared to the older cities and often their economic structure is often dependent on and complimentary to those of the older cities.

In view of this, new towns can be seen as deliberate and entirely new small sized urban development from the ground up. These are mostly housing projects that are coordinated and managed by a master developer with a balance of commercial, educational, social, and cultural

institutions and with the sole intent of decongesting older inner cities and reduce the hardship of urban life.

The overall goal of new town policies since inception according to Tan (2010) is to decongest the hitherto over populated inner cities by redistributing the urban population towards the new towns in order to improve the general standard of living of the people. This is done mostly at the state or local Government levels.

History of New Town Development

“There is really nothing new about the new town” (Weiss, S, et al 1971 p.47). However, the concept of new towns as a way of alleviating social, economic, and physical hardships of life in older cities is traceable to the post Second World War United Kingdom. Since then many other nations like France, the United States and China have adopted the concept as a tool of dealing with over-urbanization (Pacione 2001). Historically, the emergence of satellite towns began in Europe especially the UK and France dated back to early 20th century, and it began to spread into Asia and other developing countries as shown in Table 2.1 below. This trend is particularly noteworthy considering the fact that larger urban agglomeration that use to be common to most European and US cities has now shifted to the developing countries, with excessive demands on urban infrastructure and the need for a policy to decongest these mega cities (Tan 2010).

Table 2.1

Numbers and Location of New Towns Worldwide Between 1940s and 1960s (Tan 2010)

Year initiated	Countries	National number of new town	Large Cities	Number of new town around large cities
1946	UK	28	London	11
1965	France	9	Paris	5
1950	Sweden	11	Stockholm	6
1955	Holland	15	Randstad	13
1952	Japan	39	Tokyo	7
1962	Korea	24	Seoul	13
1960	United States	36	-	-
1964	Singapore	15	-	-
1950s	Malaysia	11	-	-
1957	China	50	Beijing	11

Source: Tan 2010

The British New Towns

Evans (1972) traced the origin of new towns to the publication of Ebenezer Howard in 1898, a very eloquent man and the founder of the Garden City Association who condemned the industrial towns of the time and argued that they represented eyesore on our beautiful landscape. Evans advocated for a real reform- a reform which he believed could be achieved by developing new towns. Howard was able to pressure the government into establishing acts that will enable the development of new towns. The 1940 Barlow Report and Abercrombie's Greater London Report of 1945 recommended the creation of satellite towns as a means of decongesting urban areas in

the UK based on the principle of decentralization and urban containment, redevelopment and regional balance of opportunity in metropolitan areas, particularly in the London metropolis according to Abercrombie's Report.

In response to the reports, in 1946 the UK passed an Act that allowed for the allocation of sites for building new towns as a planning tool to control the population growth in the major cities and maintain social balance among the population. The Act provided for setting up Development Corporation that would build and manage these new towns, which would encourage a planned decentralization of congested urban area. One fundamental purpose of this initiative was to create a balance between employment and the working population (Perloff and Sandberg 1972)

The new towns were to be designed in a way to accommodate a substantial proportion of the population outwards of the metropolitan area to new towns that have full local employment and community infrastructural facilities. These towns were to be independent of their mother cities and be self-contained. As such, the first eight set of new towns built around London were located within at least 20 miles from London. Perloff and Sandberg (1972) argue that while in theory, the British example of new towns serve as role model for other countries including the United States, the achievement of new towns in Britain has not really have any significant change in the urban way of life and pattern of settlement.

The criteria for the location of the British new towns include

1. They must be sited around large, densely built-up urban areas within a distance of 40km from London and 20Km from other regional cities.
2. They were to be built on Greenfield sites

3. They must not be built on agricultural land
4. They must have the capacity to house between 20,000 to 60,000 people.
5. They were to be built by private developers with loans from the government which are to be repaid with interests over sixty years.

This was a huge undertaking considering the level of infrastructural and construction demand of a new town development. This initiative balanced the distribution of new towns among private and industrial use. Some of the new towns were built based on the national income distribution to provide for middle and low income class according to their proportion in the national and regional population figures. About thirty new towns were created across Britain and by the end of 1960s, they housed more than 700,000 people, and generated about £600 million profit for the government. They have however been criticized for being unfashionable (Alexander 2009; Pacione 2001).

However, the later phases of Britain's new towns initiative left much to be desired as it has been criticized for its inefficiency in certain areas such as ease of mobility, proximity to work, lack of local control of land, separation of uses (industrial, commercial and residential) as well as rising inflation in land prices. It was argued by critics that the British new towns contributed less than significant to the housing project in the UK and in reducing problems of urban settlements.

Therefore, the commission for the new towns was disbanded in 1985 and its commercial assets were sold to private investors who now assumed the role of completing the unfinished new towns (Knox and McCarthy 2011).

The British new towns though a major housing project was not the only housing project being undertaken. The 1952 Town Development Act brought along other housing programs such as the Expanded Towns Program. The new town however was more dominant and successful due to the impact of power granted to the new town Development Corporation to manage the program. By the end of the first twenty five years, fifteen towns were almost completed and about twelve new ones were being built. These put together provided decent accommodation with essential facilities for about 1.4 million and job for 650,000 people (Alexander 2009; Pacione, M. 2001).

Commenting on the British New Town, Alexander (2009) has this to say: “The post-war New Towns were the largest public house building program of its kind” (Alexander 2009 p 4).

New Towns in the United States

The aftermath of World War II in the UK brought along the urgent need for new communities as the older cities were becoming increasingly incapable of caring for the growing population. In the United States, new towns were seen as viable alternative to suburban sprawl that could potentially house some 100 million people who were projected to be living in the suburb (Irving, L.1977).

The early experience of the Garden City in the United States could be traced to the construction of Radburn, New Jersey in the 1920s and Greenbelt, Maryland which was a product of the “Greenbelt towns” of the “New Deal” in the 1930s led by Clarence Stein and The Regional Planning Association of America (RPAA). These cities have been recognized as the first private efforts toward new town development in America and like others after them, they were pattern after the British New Town principle (Perloff. and Sandberg1972; Miels Jr. 1973).These early

new town initiatives however did not endure for long as they were either halted by the Great Depression of the 1929 or by the withdrawal of Federal funding. This further underscores two important factors in the success of new towns – market situation and government support.

Learning from the British example, the United States in 1965 created the Department of Housing and Urban Development (HUD) as a result of Robert Weaver's recommendations. The HUD was the federal agency responsible for setting criteria for the establishment of new towns and reviewing application of such to ensure compliance with set objectives. The 1968 and 1970 Federal Housing Acts were also put in place by HUD to ensure financial backing for new town development (Miels 1973; Irving 1977)

The first sets of new communities approved by HUD (Cedar-Riverside, Minnesota; Flower Mound, Texas; Maumelle, Arkansas; Jonathan, Minnesota; Park Forest South, Illinois; Riverton, New York; San Antonio Ranch, Texas and St. Charles Communities, Maryland) were within 10 – 40 miles of a major city with access to major transportation corridors such as rapid transit systems, highways and airports (Miels, H. Jr. 1973).

Another important aspect of HUD approved new towns in the United States was their size, the average sizes for the first eight towns was approximately 6,600 acres with population sizes ranging from 31,300 – 110,000 (Miels 1973). Diversity in terms of the economic base and the demographic distribution of the population was also important criteria set by the HUD for new towns, according to Miels (1973), all the new towns except Cedar-Riverside incorporate plans for industrial sector in addition to commercial sector and community facilities to expand

employment opportunities for persons of all income and skill levels. The development of these towns followed three components: neighborhood, village center and town center.

Efforts were also made to ensure that land use in these towns was balanced in a way that allowed for improved mobility, creation of open space such as parks, stream valleys, riding trails and walkways to serve not only recreation purposes but also as buffer zones between incompatible land uses. Many of these towns complied with this requirement, for example of all land area of Flower Mound; about 20% was open space while the percentage of residential was 48%. Jonathan new town was even more impressive with only 28% of it land area being residential and an impressive 21% of open space. There were also efforts to ensure improved educational and cultural facilities as well as the quality of environment (Miels 1973).

Beyond the role of establishing criteria for new town development, the HUD was also to ensure that these towns get federal government financial assistance, through the Federal Housing Acts (Irving, L.1977). In order to ensure that such assistance is secured, all the new towns are required to have a developer in order to establish its eligibility for such federal support. All the developers involved were those with experience in new town development, housing construction and rehabilitation as well as transportation.

New Town Development in Developing Countries

At the time when the Western countries of Europe and America had abandoned the new town policy and had moved on to policies that centered on re-concentration and gentrification, developing nations began to embrace new town policy as a viable alternative to the problems of urbanization that confronted them. Many Cities in developing countries like Cairo in Egypt, Rio

de Janiero in Brazil and Lagos in Nigeria have had to grapple with the reality of overconcentration of population and have reacted by enacting policies favoring the establishment of new towns (Stewart, 1996). Although China and Egypt have a history of new town development that coincides with or precedes new towns experience in the UK and US, only in recent times have they engaged on deliberate policy toward developing new towns as a way of controlling overcrowding in their cities (Stewart, 1996; Tan, 2010).

The Chinese New Towns

In China, new town development began in Beijing in 1953 and in Shanghai in 1956. At that time, it was mainly as a response to the need for national defense. By 1958, other regions have joined in the movement to advance the building of satellite towns around large cities such as Beijing, Shanghai, Tianjin, Chongqing, Chengdu, Wuhan, and Shenyang (Tan, 2010).

Many policies were enacted to support and enhance the new town development policy. Among them is the preferable public finance policy, public investment and land use policy that focused heavily on measures that will promote the development of new towns in the regions. Other policies include measures that prevent the further development of the inner cities, such as downtown heavy industries redistribution, downtown enterprise outmigration, limitation of downtown economic development and the reconstruction of older inner cities.

The combination of the new town and new urbanism policies will help redistribute the population and address the decaying of the older inner cities. There were also measures to incentivize the outmigration from inner cities to the new towns, those measures include employment, unified labor market and tax break. Though, Beijing's satellite towns witnessed a

sporadic population growth in the 1990s, the actual population from the central city absorbed by satellite towns is quite small. While the population grew about 73.5 percent, from 991,000 to 1,719,000, during the 1990s, the amount of population from Beijing to the satellite towns increased only by 17.1 percent. Beyond this Tan (2010) reported that the proportion of the population absorbed by the satellite towns of Beijing from other provinces are quite greater than from the rural areas of Beijing and that the rate of population growth in satellite towns is faster compared to the central city. Tan (2010) concluded that the Chinese satellite towns did not represent any effective policy in urban social economic and population redistribution, they were just label to describe another factor or regional urban policy that promote urbanization.

The Egyptian New Towns

New town in Egypt according to Stewart (1996) has a long history dated back to the construction of Memphis in 3100 B.C., to the era of reclaiming land from the Nile and more recently to the new town of Heliopolis, founded in 1905 and located in the desert northeast of Cairo. In recent times, new towns policy in Egypt like many other countries of the world has been in response to the degrading living conditions of the large cities like Cairo and Alexandria. Specifically, the unexpected population explosion of the 1960s, failing infrastructure, rising unemployment, traffic congestion lack of urban service delivery and poor housing conditions in the inner cities had called for an urgent action on the part of the government (Simone & Abouhany 2005; Stewart, 1996).

Stewart (1996) reported that up to 6 million people are living within the Cairo official administrative boundary, over 10 million within the Greater Cairo Region and only 3 million within the next largest city of Alexandria (Stewart, 1996). The situation in Cairo was so bad that millions of its residents lived in accommodation that were labeled “city of the dead” due to the poor conditions of houses and the hygiene level of those areas. Urban decay began to be a concern for the government and infrastructure had begun to fail, unemployment was on the increase and the environment had deteriorated at an alarming rate, the abysmal level of urban service delivery in highly dense inner city centers lacking basic urban services was also on the rise bringing an untold hardship on the inhabitants of Cairo. It then became pertinent that the government devise a housing policy that can effectively lead to an improved standard of living in Cairo.

As a response to the aforementioned, the Egyptian President, launched the Greater Cairo Region Master Scheme and called for the creation of four new satellite cities by 1990 around Cairo. The idea was that the new towns would absorb population from Cairo and serve as alternative destination for urban development (Stewart 1996). This outcome is credited largely to the effort and personal dedication of Hassan Kafrawi who was appointed Minister of New Communities in the 1970s and led a triumphant effort towards a successful development of new towns even in the face of opposition within the Egyptian government. Kafrawi led the effort in the development of the master plan in 1970 which focused mainly on the creation of satellite towns on desert lands around Cairo. In 1979, the Law No. 59 was established to provide legal and geographic framework for the new towns and this gave momentum to their construction. The law stipulated that these towns must be situated away from the farmland of the Nile River. These towns according to the plan were to accommodate 5 million people by year 2000, and in order for them

to be truly independent, they were located at least 50 kilometers away from Cairo with capacities to provide jobs and other services to the inhabitant while some are linked to the city to enhance connectivity. The new towns of 6 October, Al Obour and 15 May were located about 40 kilometers outside of Cairo and were planned to accommodate between 250,000 to 500,000 people. Also, the new towns of 10 Ramadan, Al Badr, New Ameriya and Sadat City were designed as freestanding new towns that were located at some greater distance from Cairo and Alexandria and along the Cairo Desert Highway. These towns were planned for an estimated population ranging from 500,000 to 1 million people (Florin 2005; Stewart 1996).

Although major housing projects were not implemented until the 1960s, by the 1980s for instance, 50,000 housing units have been built in Cairo and that accommodated about 310,000 people. Apart from the new towns program, there were also other housing projects that existed to accommodate additional population. The 1981 Master Plan for instance provided for the establishment of what was called the “new settlements” to accommodate additional 2 million residents of Cairo. These new settlements differ greatly from the new towns because they are sited on the city outskirts in the desert along development corridors with transportation linkage and their design follows a new urbanism pattern. In the 1980s, the social housing policy was replaced by building cooperatives that took on the new town project in the desert and funded largely by public sector loans. The New Community Authority, a subset of the Ministry of Housing and Reconstruction was the body established to manage the construction of these towns

The argument against the effectiveness of the satellite towns in Cairo can be seen from the example of Six Octobre satellite town where the town was divided into twelve separate districts targeting mostly high and middle income class. Some of the districts were reserved mainly for very rich families with luxury villas and basic facilities such as school, shopping and religious center and well maintained lawn on one hand and crowded districts with lower quality and rapidly deteriorating buildings lacking basic services on the other. The design of the Six October towns was marred by irreconcilable contradictions and did not provide a single district option for the low income class. This kind of separation is promoted by private real estate developers who take advantage of public infrastructure to further their profit interest (Stewart, 1996).

In many respect, the effectiveness or otherwise of new town policy is hinged on its effect on population change and the origin of the population that makes up the majority of the residents of new town. Tan (2010) has advanced questions that can provide an insight into whether the new town program has achieved its objectives or not. These questions include: has the new town development greatly reduced population density in the inner city? Is the newly increased population in the new town from the central city or from other regions? These are very important questions to ask because the primary target for redistribution objectives is the population in the central city. Hence if larger proportion of migrants to the new town come from other region, it then means that the new town policy has served as a catalyst to urbanization rather than addressing the problem of urbanization. Simply put, the analysis of population flow to the new town is the test of the effectiveness of the new town policy. Many of the new towns discussed in this research are today large cities on their own

New towns are built strictly according to a planned guideline with view to create a compact community where residents know each other and have ease of access to services and independent of the larger surrounding cities with adequate job for all residents. Also vision includes creating a balanced society that contains all age groups and population characteristics. New towns designs also place emphasis on closeness to nature (Perloff and Sandberg 1972).

Nigeria's New Towns

Nigeria's new town policy began in April 1981, when the government of Lagos State established The Lagos State New Town Development Authority (NTDA). This department was charged with the responsibility of effectively implementing the planned growth of Lagos State, decongest the metropolitan area and ensure even development throughout Lagos State by creating new towns – a new set of communities that are independent of the central city and contain economic and infrastructural capacities to cater for their inhabitants (Rasaki 1988).

The effort of the Lagos State government towards new town development is consistent with the argument put forth by Stein (1957) that the idea of directing energy towards a New Town policy is a logical one because it is a way of building new communities outside urban areas from the ground up that fits the demand of contemporary urban population. Stein believes that efforts should be advanced towards building new towns alongside redevelopment of the older cities but that the objective of the redevelopment should be to explore new pattern of development (LSNTDA, 2013).

The principal oversight body for the development of new towns in Lagos is the New Town Development Authority (NTDA). This government parasternal, according to Rasaki (1988) was charged with the following responsibilities:

1. Establishment and development of new town schemes in Lagos
2. Provision of infrastructure in all Government estates
3. Promotion of Large Scale Physical development
4. Selection of site and survey for development projects
5. Monitoring and control of all government estate to prevent and remove unauthorized structure in government estates.

In carrying out these responsibilities, NTDA also work in collaboration with other government agencies and Ministries such as the Lagos State Physical Planning Authority (LASPA) that is responsible for the layout and master plan of the scheme and the Land Bureau responsible for the allocation of plots to developers and individual applicants for development. The Town Planning Services Department of the NTDA is responsible for the design of new developmental schemes, preparation of detailed technical report on development schemes, development control within Government schemes, site selection for new town development purposes, incorporation of existing communities into Village Excision arrangement, project monitoring/management along with site visits and schemes monitoring, liaising with other Government agencies such as Land Bureau, LASPD and private organizations (LSNTDA, 2013).

A five-step framework for development was set up as follows:

1. Site Identification/Recognition survey: this is the first step in new town development process and it involves gathering preliminary information about potential sites for suitability test. Tests carried out on these sites include soil test and topography test. Matters of accessibility are also considered at this stage in order to determine the linkage between the site and the major urban areas. Issues of land use are also a concern at this stage. It is pertinent to know if the area is currently occupied for residential or agricultural purposes, and to determine the provision of the Lagos Master Plan for the usage of the parcel. This is especially crucial in order to avoid encroachment on agricultural land.
2. Acquisition: once the suitability of the site has been determined for new town development, the next step is to acquire the land. At this point there are two possible processes to follow; if the parcel is within government own property, it is transferred to the NTDA through Lagos Global Acquisition process but if it is a private owned village, the transfer takes place through an arrangement called “excised village”. Excised village is an arrangement of the Lagos State government that provides for land owners to obtain development permits from the government. The essence of this provision is for the development of such villages and land transfer arrangement to conform to government development standards while the villagers still retain their land ownership titles.

3. Physical Layout/ Design: this process is typically the design of plan for the scheme which involve dividing the parcels into plots, road and infrastructure placement, divisions between residential, commercial, public and open space uses in order to provide a guide for lot allocation and development. In some cases however, the entire parcel is allocated on a lump sum basis to. The design is centered around three basic patterns:
- Site and Services scheme: the site and services scheme is a design that focuses on developing the site with all basic infrastructure and services such as Neighborhood Park, water and sewage facilities, schools and open space in place.
 - Affordable Housing scheme: this scheme type is aimed at providing alternative housing options for medium income families. Since most individual housing construction in Lagos defies the vision of the Lagos master plan, the new town's affordable housing schemes are avenue to promote building development that are consistent with the master plan and yet affordable.
 - Private Developer scheme: The private developer schemes are sites that are allocated mostly in lump sum to developers who have the expertise and the funding to accelerate development. This helps the NTDA to focus on other aspect of new town development and allows developers to create investment and make profit.
4. Allocation: following the layout, the lands are allocated either on a plot-by-plot basis or on a lump sum basis for development. Capital Development Levy is the initial down payment which by law currently stands at 70 to 80 percent of the total cost of the land.

The Capital Development Levy is then used to start infrastructural development such as road construction, water and sewage facilities, electricity etc., within the scheme. This process occurs concurrently with individual housing construction.

5. Monitoring and control: because on many occasion, residents and developers of satellite town tend to engaged in practices that conflict with the basic principles of the estate and threatens the achievement of the overall objectives of the initiative, NTDA conduct a routine monitoring operation to prevent erection of illegal structure and shanties and to demolish of existing ones . Effort is made to partner with LASPA (Lagos State Physical Planning Authority) because NTDA does not have legal authority to demolish illegal houses that are built on public properties or without appropriate permission (Aboyeji 2012).

Table 2.2 Summary Table of All Lagos New Towns By local Government Area since Inception,
Compiled by Tpl. Aboyeji NTDA 2012

S/N	TITLE OF SCHEME	USE CLASSIFICATION	PRESENT STATUS	YEAR DESIGNED	AREA IN HECTS.	NO OF PLOTS
BADAGRY DIVISION						
1	AmuwoOdoFin New Town	Mixed Use	Fully Developed	1969	984.4	-
2	Ijanikin Rose Garden	Residential	Fully Developed	2002	95.8	816
3	Otto-Awori-Jobiti Res. Scheme	Residential	Encroached	1986	942.19	-
4	Otto-Awori-Jobiti Teachers' Village	Residential	Partly Encroached	2003	32.6	305
5	Ologe-Agbara Res. Scheme (Formerly portion of Industrial Scheme)	Residential	Fully Encroached	2004	19.93	164
6	Mosafejo-Aradagun Res./Mixed Dev. Scheme.	Mixed Use	Fully Developed	2002	345.862	1649
7	Ajido Residential Scheme	Residential	Abandoned	2005	7.03	80
8	Ojo Residential Scheme	Residential	Partly Encroached	1988	338.01	-
9	Ojo Institutional	Institutional	Fully Developed		-	-
10	LSG. NEPA Residential Ojo	Residential	Abandoned	1999	11	-
11	Sunny-field Residential Scheme, Oko-Afoilogbo	Residential	Fully Developed	2007	141.05	
12	GanyinboOgungbe Scheme	Private Estate Developers	On-going	2008	495.035	
13	Fadaka Residential Scheme, Badagry	Residential	On-going	2010	342.93	1886
14	Magotho City Scheme, Badagry	Residential	On-going	2011	750	5789
15	Oba Akran Garden Scheme, Badagry	Residential	On-going	2011	104.616	457
17	PovitaAkarakumo Res. Scheme, Badagry	Residential	On-going	2010	153.157	901
18	Suntan Beach Scheme, Badagry	Residential	On-going	2011	92.958	392
19	Mowo Mixed Devt. Scheme, Badagry	Residential	Fully Encroached	2010	-	

Table 2.2 Cont'd

20	IyaAfin Residential Scheme	Residential	On-going	2010	125.051	653
21	Povita Residential Scheme, Badagry	Residential	On-going	2010	30.3	243
EPE DIVISION						
22	Orisan Water Front Scheme	Residential	On-going	2003	68.12	
23	Teachers' Village, Temu-Epe	Residential	Design Completed	2003	10.03	
24	Agbowa Mixed Dev. Scheme I	Mixed Use	Design Completed	2009		
25	Prime Valley Scheme (Former Agbowa Mixed Development Scheme II)	Residential	Design Completed	2011	135	
26	Epe Residential Scheme	Residential	Fully Developed	1997	-	191
28	Ehingbetti City Scheme 1, Epe	Residential	On-going	2010	521.874	2573
30	Light Industrial Scheme, Epe	Mixed Use	On-going	2007	49.625	138
IKEJA DIVISION						
32	Isheri North Residential Scheme	Residential	Fully Developed	2000	393	
33	Oko-Oba III Extension 2	Residential	Fully Developed		2.4	
34	Oko-Oba Residential. Scheme II Extension	Residential	Fully Developed	2007	5.36	62
35	Oko-Oba Residential. Scheme III Ext. 3	Residential	Fully Developed	2006	1.25	15
36	Oko-Oba Res. Scheme II	Residential	Fully Developed		4.67	
37	Oko-Oba Res. Scheme IV	Residential	Fully Developed	2004	8.38	78
38	Oko-Oba Res. Scheme III	Residential	Fully Developed	2003		115
39	Ipaja New Town Scheme	Residential	Fully Developed	1986/88	593.37	-
40	Oworonsoki Residential scheme	Residential	Fully Developed	1980	43.18	

Table 2.2 Cont'd.

41	Ilupeju Industrial/Residential Scheme	Mixed Use	Fully Developed	1963		
42	Oshodi/Isolo/Matori Industrial Scheme	Mixed Use	Fully Developed	1971		-
44	Akowonjo Mixed Dev. Scheme	Mixed Use	Fully Developed		654	Lumpsum Allocation
45	Akowonjo Res. Scheme (part of the Mixed Development Scheme)	Residential	Fully Developed	2005	4.9	57
46	Crystal Residential Scheme Alapere	Residential	Abadoned	2005	85.95	
47	Omole Residential Scheme	Residential	Fully Developed	1981	-	930
48	Ojota/Ogudu GRA I &II	Residential	Abadoned	1995	207.24	697
49	Ikeja CBD	Commercial	Fully Developed	1986	97	
50	Ikosi Residential Scheme	Residential	Abadoned	1985	20.13	
51	Crystal Residential Scheme Alapere	Residential	Fully Developed	2009	3.689	39
52	Ogba Res/Industrial Scheme	Mixed Use	Fully Developed	1972	226.3	-
53	Igando/Egan/Akesan Scheme	Residential	Abadoned	1986		
54	Fortune Garden Res. Scheme AlapereKotu	Residential	Encroached	-	27.23	
55	Crystal Residential. Scheme Extension, Alapere	Residential	Fully Developed	2005	2.95	40
56	Paradise Garden Res. Scheme Anthony	Residential	Fully Developed	2006	7.23	58
57	Foreshore Garden Scheme, Isheri North	Residential	Fully Developed	-	150	
58	Gbagada Scheme 1 &2	Residential	Fully Developed	1971		305

Table 2.2 Cont'd.

59	Gbagada Scheme Extension	Residential	Fully Developed	1977	- 3.86	184
60	Oworonsoki Residential Scheme Extension	Residential		2010		
61	Fortune Garden Res. Scheme, Ketu, Alapere	Residential	Fully Developed	2009	27.23	153
IKORODU DIVISION						
62	Ikorodu GRA Res. Scheme	Residential	Fully Developed	1987	148.8	
63	Ikorodu GRA II Res. Scheme (Former GGH site)	Residential	Fully Developed	1998	40.12	
64	Ikorodu Industrial Scheme	Industrial	Encroached			-
65	Ikorodu GRA III Res. Scheme. Odo-nla (Formerly portion of Industrial Scheme)	Residential	Fully Developed	2001	150.77	981
66	'mote Mixed Dev. Scheme	Mixed Dev.	Mixed Devt.	2003	83.3	429
67	Millenium Res. Scheme I Igbogbo GRA	Residential	Fully Developed	2004	50.15	450
70	Grcengate Res./commercial scheme	Mixed Dev.	Fully Developed	2009	85.95	644
71	Ikorodu GRA III Res. Scheme. Ext. 4	Residential	On-going	2010	41.68	408
72	Igbogbo Industrial/ Mixed Dev. Scheme	Mixed Dev.	Completed	2008	108.74	
73	Millenium Res. Scheme, Igbogbo GRA III	Residential	Completed	2007	149.65	1152

Table 2.2 Cont'd.

LAGOS DIVISION						
74	Victoria Island Scheme	Residential	Fully Developed	1973	-	
75	Victoria Island Annex Scheme	Residential	Fully Developed	1982	92	-
76	Ikoyi Residential Scheme	Residential	Fully Developed	1962		-
77	Lekki Peninsula Scheme I	Residential	Fully Developed	1981	1046.6	4391
78	Lekki Peninsula Scheme II	Residential	Fully Developed	1995	566.25	2387
79	Royal Garden Scheme	Residential	Private Estate			
80	Abijo GRA Scheme	Residential	Fully Developed	1997	304.605	1966
81	Lekki Peninsula Foreshore	Residential	Fully Developed	2001	54.44	227
83	Iberekodo Industrial Town	Mixed Use	Up-coming	2005	896.17	1799
84	Apapa Residential/Industrial Scheme	Mixed Use	Fully Developed	1971	450.26	
85	Parkview Extension, Ikoyi	Residential	Fully Developed	1995	3	22
86	2nd Avenue Estate, Ikoyi	Residential	Fully Developed	1996	7.36	50
87	Dolphin Scheme Extension	Residential	Fully Developed	1997	3.75	-
88	'kola Model Estate	Residential	Fully Developed	2004	14.28	106
89	Lagoon View Mixed Dev. Scheme	Mixed Use	Private Estate	2002	135	373

Table 2.2 Cont'd.

90	Sky-View Mixed Dev. Scheme	Mixed Use	Fully Developed	2004	-	Lumpsum Allocation
91	Green Park Mixed Dev. Scheme	Mixed Use	Fully Developed	2004	-	Lumpsum Allocation
92	Ocean View Scheme	Private Estate Developers Scheme	On-going	2009	176.7	Lumpsum Allocation
93	Animashaun Extensions I & II	Residential	Fully Developed	1974	44.3	
94	Atlantic Beach Resort Scheme	Private Estate Developers' Scheme	On-going	2002		
95	Western Avenue Extension	Residential	Fully Developed	1974	54.66	
96	Millennium Estate Ajah	Residential	Fully Developed	2005	21.963	
97	Moremi Scheme, Ogombo	Private Estate Developers' Scheme	On-going	2011	270.004	Lumpsum
98	Erelu Scheme (former Grand View Scheme)	Residential	On-going	2011	220.504	850
99	Arewa Court Scheme	Residential	On-going		11.29	85
100	Idera City Scheme, Lekki Sub-region	Residential	On-going	2010	1319	5965
101	Ibeju Coastal City Scheme, Lekki Sub-region	Residential	On-going	2012	500	
102	CBD/Mixed Devt Scheme, Lekki Sub-region	Private Estate Developers' Scheme	On-going		20649.8	Lumpsum Allocation

Table 2.2 above is a summary of all the new towns in Lagos. The table shows the name of each scheme, the year of design, their use classification and the land area of each parcel. The Table shows that at the time of this research a total of over 100 sites have been design for new towns development. These sites cover a total of 38,933.323 acres of land and spread across all axis of Lagos. Although, some of them were unsuccessful due either to encroachment by local residents, abandonment or natural disaster such as flood which is inevitable in most parts of Lagos being a coastal city, many of these towns have been fully developed while some are still being developed and yet many others at the early stage of development.

The table also shows that the idea of new town development in Lagos has existed, even before the creation of the New Town Development Authority. For instance, the Amuwo Odofin new town was designed in 1969 and was managed by the LSDPC before the creation of NTDA in 1981.

It is noteworthy from the table that about 95 percent of the schemes are exclusively residential in their design; this is a clear departure from the basic principle of new town planning which is to balance housing, jobs and services by creating allowance for industrial and commercial in addition to residential uses.

Due to limited literature on the Lagos new town, this research cannot provide a detail discussion of all the new town in Lagos. Table 2.2 above represents the only information that was available regarding the existing new towns and those for which designs have been completed. The NTDA however provides some additional details regarding some of the ongoing projects that are featured in the table. Specific details about these ongoing new town projects as extracted from the NTDA website are presented below.

- I. Igando: The Igando scheme, located within the Alimosho Local government Area along LASU expressway is a 10.09 hectares area of site designed to provide 41 residential plots, 1 commercial plot, 20 plots of institutional development 2 plots of open space and 1 plot of industrial use. The scheme is designed to accommodate a population of 3,232 persons and the design included infrastructures like road network and drainage, power supply and distribution, water supply and distribution Sewage and Fire service
- II. Idera City: Idera City scheme is also an ongoing project that was designed in 2010 to cater for an estimated population of 128, 856 people residing in 3182 of high density residential plots, 1226 medium density residential plots, 1540 low density residential plots and 607 commercial plots along with an additional 17 mixed development plots that are carved out of 1,319 hectares of total site area. Its proximity to the Lagos-Epe expressway in Ibeju-Lekki Local Government Area will provide an ease of access to major metropolis of Lagos and neighboring States. This city also provides for basic infrastructure and services.
- III. Kings Court Mixed Development: Situated at Sangotedo, Off Lekki-Epe Expressway, Eti-Osa Local Government Area, it is close to the major bustling towns like the Victoria Garden City (VGC) and Ajah Town and accessible through a dual carriage road. The total area for this development is 70.19 hectares and as the name suggests, it is mixed use comprising offsite and services area, public (affordable) housing area and a central facilities area. It is designed to accommodate 15,340 persons. Some of attractive feature added to the design of this scheme include the central communal facilities area that

contains utility, commercial area, place of worship, schools, recreation/event center and market, along with a well paved walkways and soft landscaping (LSNTDA, 2013).

- IV. Erelu Estate: This scheme is also along the Lagos-Epe Expressway and about 1 mile away from high class housing estates like the popular Abraham Adesanya Housing Estate, Ajah with good linkage to major commercial corridors like the Lekki Free Trade Zones will an ideal destination for most Lagosians. Erelu estate is designed for a population of 28,520 and covers an area of 220.504 hectares. The vision of the designers is to make it a sustainable living environment with a mix of high living standard and nature with robust infrastructural services.
- V. Oba Akran Garden: The Oba Akran Garden is planned for 4,952 residents on a land area of 104.616 hectares along Lagos-Badagry Expressway. This location is also very accessible from major interstate highways and is created to provide unique living environment along the major arterial road in order to boost the good image of Lagos. The design concept of this scheme also includes hedges and ornament, paving stones and soft landscaping for beatification.
- VI. Sangotedo Court: The Sangotedo scheme is located within the Lekki peninsula sub-region with road networks linking Lagos-Epe expressway is designed for an estimated population of 2672 persons on a land area of 11.29 hectares divided between 1600 blocks of flat housing, 544 single detached housing and 66 town home units. Infrastructure includes an administrative center, electricity, recreational facilities, and hospital and fire services.

Conclusion

The purpose of this chapter was to review the relevant literature to the topic of this thesis so as to place the thesis in context. This literature was divided into the role of cities, theories of urban growth, the historical pattern of urban growth, problems of urban growth and policies and strategies for dealing with the problems. So far this review has established that cities play important economic and social roles in society. The theories of urban growth provide insight into the reason for urban growth. They show that economic advantage of agglomeration and the natural human inclination to congregate with people with common socio-cultural background are reasons behind urban growth. In addition, the culture of uncontrolled rural-urban migration in developing countries has also contributed to urban growth, further increasing the woes of city dwellers and creating an enormous policy challenges for metropolitan government

However, the historical pattern of urban growth across the globe has been different. Thus, while urban growth in developed countries was activated by industrialization and economic growth, in developing countries, the main driver was rural-urban migration. An ever-increasing urban population without corresponding economic and infrastructural growth has inevitably increased the woes of city dwellers in developing countries; crippling mobility, rising crime rate, poor housing condition, proliferation of scattered settlements and higher incidence of diseases and death are among the problems inflicted on city dwellers in developing countries.

Over the years, several attempts have been made to alleviate the problems of urban growth. Among the policies that have been recommended and tried are: mixed housing schemes, self-help housing

improvement, immigration control, participatory urban planning, registration of informal sector, and the new town policy.

New town development in Europe and the United States has been a policy outcome from planners to respond to the untold hardships that post-war industrial city decline posed on the inhabitant. New town development as an urban policy response to solve congestion and infrastructure problems of large city has its root in Britain.

In Europe and the United States from where the idea of new town was imported, extensive urban policy discussions and research have led to a shift of focus to more sustainable urban policy agenda. These countries have now moved on to policies of re-concentration and urban renewal that are considered more sustainable over the new town policy.

However, in developing countries such as Nigeria, the policy is being implemented. The new town policies, though had successes in many areas have been flawed in many other aspects, questions still remain whether it is sustainable for developing countries in general and Lagos in specific to continue pursuing this policy in the twenty first century.

In particular, the Lagos State government has been relentless through its New Town Development Authority (NTDA) in its effort to promote adequate housing and infrastructural development in Lagos and it has been successful in creating over 100 new (satellite) towns. Judging from the spatial spread of population in Lagos at the time of this research, one could presumably argue that the satellite town project has been successful in redistributing population in Lagos. However, the questions that remained unanswered are whether the spatial spread of the population has any direct link to the new town project and whether the new town development authority can pride itself in

adequately housing the most vulnerable of Lagos residents. It is important to remember that the prime objective of new town development as a housing project is social rather than economic, hence, the next chapter will examine from the perspective of the residents of existing satellite towns in Lagos Nigeria, to what extent has the satellite town program address the housing needs of the people. The next chapter describes the methodology that was used to address these questions.

CHAPTER III

METHODOLOGY

This chapter covers the research design of the thesis, the selection of the study area, data types and sources, and methods of data collection and analysis.

Research Design

In order to evaluate the effectiveness of the new town policy in Lagos, four measures were used based on the objectives of the new town policy in the literature (Alexander 2009; Tan 2006; Perloff and Sandberg, 1972; Miels 1973; Stewart, 1996). These measures include population density and daily average commute, cost of living and affordability, quality of infrastructure, location of jobs and journey-to-work trips.

- Population density and daily average commute. Given decongestion as one the main motivators of the new town policy, population density and traffic congestion were used. These two factors were used to answer the question: Is congestion still a problem despite decades of new town development?
- Cost of living and affordability of the new towns: Another purpose for creating new towns is to reduce inequality in housing and infrastructure among urban dwellers, and thereby promote equitable development. The objective here was to see if the most vulnerable of the population – the slum dwellers can actually afford to live in the new town. This factor was thus used to answer the question: Is the new town policy being used as a means of correcting spatial socioeconomic imbalance in Lagos?

- Infrastructure situation. The new town policy is also supposed to address infrastructure and social services for the residents. This factor was used to answer the question: Does living in the new town make a significant difference in households' living condition and access to services and infrastructure?
- Location of jobs and journey –to-work trips. New towns are supposed to be self-contained and independent in terms of providing jobs for their residents. This is also to reduce the daily demands on the infrastructure and services of the central city. The two factors were therefore used to answer the question: Do new towns residents still go to work in the central city or not?

Selection of the Study Area

To examine the effectiveness of the new town policy in solving congestion problems in Lagos, it was necessary to survey households within existing new towns. Three existing satellite towns that have been fully developed and inhabited were selected for the study. The towns are: Ikorodu GRA (Government Reserved Area) Magodo GRA (Government Reserved Area) and Lekki Phase I new towns. The selection of these survey sites was based on the researcher's own discretion using two simple criteria;

- I. Sizes: The first criterion considered was the size of these selected new towns. The three towns surveyed varied in size ranging from small, medium to large sizes. For instance Ikorodu GRA covering only 555 acres of land area is considered a small scale development compared to Magodo GRA with 450.76 acres which is much of a medium scale development and a much larger Lekki Phase I with 1,973 acres of land area. Again

the classification of this estate into these three development scale based on their sizes is subjective. (Table 2.2).

- II. The second criterion is the location of the sites. That is, their proximity to the central city. Ikorodu GRA is 12.4 (20km) Miles Northeast of the central City, Magodo GRA is located some 11.5 Miles (15.5km) Northwest of the central City while Lekki Phase I is to the southeast, some 5.5 miles (8.9 km) away from the central city. (Figure 4.1). The assumption here was that the closer a satellite town is to the central city, the better the connectivity, the faster its development and the more effective it is in achieving the objective of population redistribution. Lekki Phase I again is more advantageous in this aspect and is closer than the other two sites to the central city.

It is believed that size and location of these towns may play a role on the level of infrastructure development and the income of the residents. Since larger towns enjoy economies of scale, the sizes of these towns may have played a role in their development. It would also be interesting to find out if the larger estates like Lekki Phase I is able to provide employment for most of its residents compared to its other two counterparts, in order to establish that, the researcher looked at the distance to work and mode of transportation of the respondents in each of the estates. The more distant an individual travel to get to work every day, the farther the workplace to the estate and the more people travelling such distance, the higher the likelihood that the new town is independent in terms of employment.

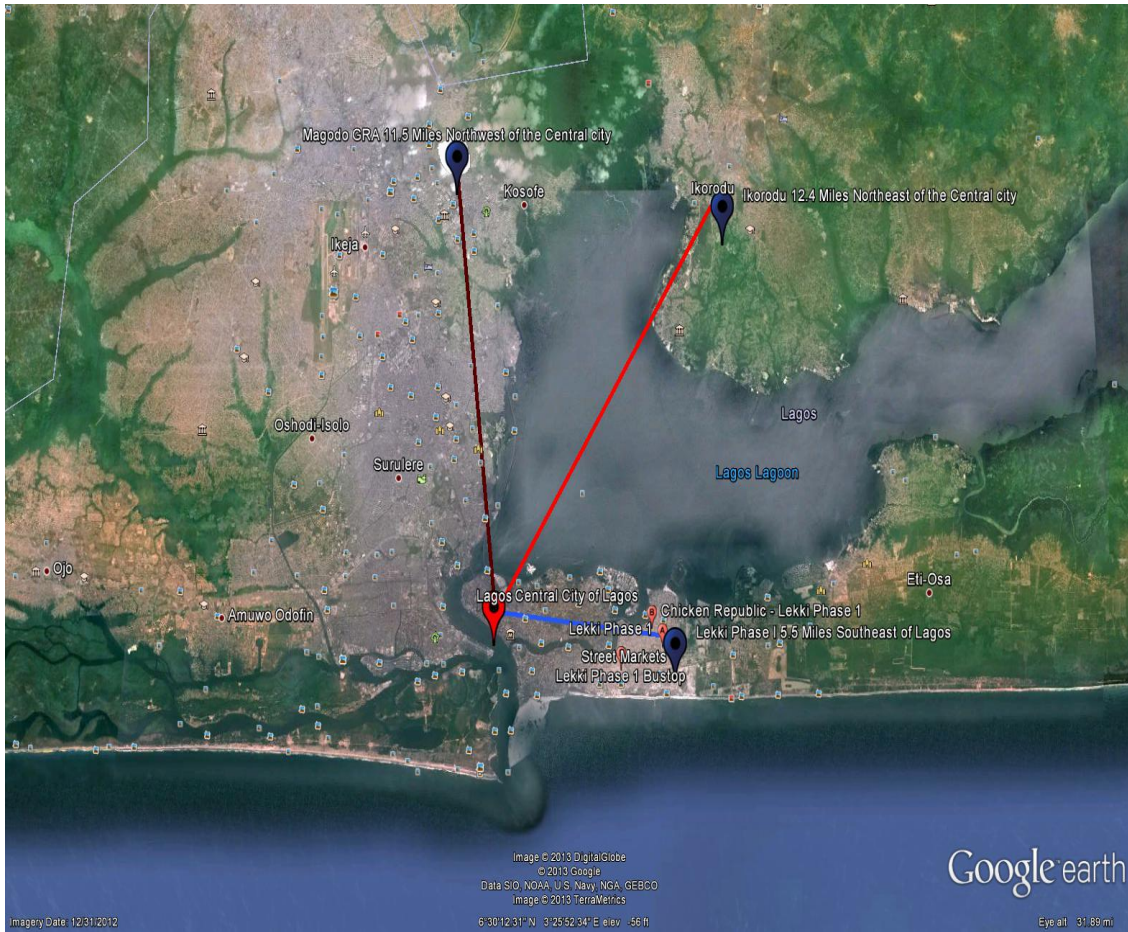


Figure 3.1: Areal View of the Surveyed Sites (Google earth, 2013)

Data Type and Collection Method

The data used for this study were largely primary data based on the survey conducted by the researcher in the summer of 2012. The survey was based on three selected fully developed satellite town in Lekki, Magodo and Ikorodu areas of Lagos. Since these estates are predominantly gated communities, going from-door-to-door was impossible, thus the researcher used the medium of the residents' association to distribute the survey to the residents through their respective managers. In all the cases, the mode of distribution of the survey was a simple random sampling where, the managers just handed the survey questions to residents as they drove pass the main gate in which case all the residents had equal probability of being selected (Rogerson 2006). In most cases it took several days before all the surveys were returned and many still were never returned. It took several days and efforts before getting approval from the residents association of all the three estates surveyed except for Lekki phase I where the manager graciously took it upon himself to help distribute to the residents. However, it was difficult retrieving the responses and Lekki accounted for the lowest return rate of all the three estates surveyed.

In order to ensure the authenticity of the survey, both the research script and the consent letter (Appendix A and B) were attached to the questionnaire. These information provide an alternative to a face-to-face introduction of the researcher and the purpose of the survey had the survey been distributed in person.

Not all the data used in the study were primary. Secondary data were collected from published articles to provide the background information about Lagos and establish it as a megacity. These sources were largely government publications.

Survey

the survey (Appendix 1) used in this research was designed to get the opinions of residents of existing satellite towns about the effectiveness of the program in redistributing population and solving congestion problem in Lagos. There were a total of 33 questions divided into three parts: demographic related, infrastructure-related, and new town-related questions. Demographic related questions asked respondents about their gender and income status. Infrastructure related questions asked respondents to rate the efficiency of electricity, water, transportation, road, school and security in their estate on a scale of 1 to 4 with 1 being very good and 4 being poor. Finally, new towns specific questions asked respondents about their knowledge and awareness of the new initiative in Lagos and whether or not they think it is effective in solving congestion problems in Lagos.

Methods of Analysis

Survey responses were coded and summarized numerically and entered into a spreadsheet. The data were analyzed using SPSS software. Several hypotheses related to the effectiveness of new town policy in solving congestion and other problems in Lagos were tested using the chi-square test in the SPSS software.

Problems of the Study

The study has a number of problems. A total of 100 surveys were distributed, only 35 (n= 35) were returned. For that reason, many of the cells in the chi-square test have expected values that are less than 5 and thus constitute an unreliable test. Again the numbers were too small to report so an initial attempt was made to use percentages for the chi square analysis which turned out not to

be ideal parameters for reporting a chi-square test; hence the analysis was limited to the use of proportions based on cross tabulation of the variables.

In addition, several visits were made and letters were written to the Office of Surveyor General and other relevant Lagos State Agency to obtain some secondary data that can help in this analysis but to no avail. This again is a testimony of the difficulty involved in obtaining data in Nigeria. In spite of these difficulties, an attempt was made to analyze the data that were obtained through the survey as best as possible. The next chapter will examine the specific case of the Lagos new town policy and present the results of the analysis.

CHAPTER IV

ANALYSIS

Introduction

This chapter presents the results of the analysis conducted as part of this thesis. It begins with some background information about the evolution and development of Lagos as a megacity and traces the efforts made to address many of its problems. This is followed by analysis and discussion of the effectiveness of the new town policy. The chapter is organized in three sections. The first section details the conditions of the Lagos Megacity. The second section presents the analysis of the survey data in terms of congestion, affordability, infrastructure, and job location and commuting. The third section discusses the results of the analysis.

The Megacity of Lagos

The megacity of Lagos is located in Lagos State in southwestern Nigeria with an area of 357,700 hectares, 22% of which is lagoons and creeks, stretching 180 kilometers along the coast of the Atlantic Ocean. Lagos, though the smallest state in Nigeria in terms of land area is the largest in terms of population and unquestionably the commercial hub of the country, employing 45 per cent of the Nation's skilled human capital. The city of Lagos comprises of 16 out of the 20 local government areas that make up Lagos state and is home to some 90% of the entire Lagos state population and home to more than one third of the countries' total urban population (UNHABITAT 2010).

Because of its rich aquatic endowment and proximity to the lagoons and the Atlantic Ocean, Lagos attracted the attention of the British as an important slave port in 1822 and soon became the terminal

for many colony routes on the West African coast. This with the influx of many commercial concerns that came along marked the beginning of population explosion in Lagos. In addition, Lagos became Nigeria's Federal capital under the British colonial power in 1953 and attained the formal status of a federal capital in 1967 after Nigeria got its independence from Britain. Since that time, the city has been growing in leaps and bound both spatially and in terms of population. The expansion of Lagos has taken place primarily along the Lagoon to the west to form conurbations such as Ikeja and Agege now called the Mainland Lagos, separated from the Island by the main channel draining the lagoon into the Atlantic Ocean and reaches more than 40km North-West of Lagos Island, including suburbs like Ikorodu, Epe and Badagry (Figure 3.1 shows the population density in major metropolitan areas of Lagos).

Between 1952 and 1962, the population of Lagos grew from 346,137 to 1,135,805 representing an annual growth rate of 11.4 per cent. By the year 2000, the population of Lagos was 13.5 million, making it the 9th largest mega city in the world at that time after Tokyo (27.9m), Bombay (18.1m), Sao Paulo (17.8m) Shanghai (17.2m), New York (16.6m), Mexico City (16.4m), Beijing (14.2m) and Jakarta (14.1m) (Francisco 2006). In 2006, Lagos population was around 17.5 million and it is expected to reach 25 million by 2015 according to the United Nations' projection (Olokesusu. 2011).

At the moment, Metropolitan Lagos which is at the center of the riverine State occupies about 132,350 hectares of the land area and houses an estimated 5.6 million in 1988 and by 2010, according to Oshodi (2010), over 91% of the population were living in the metropolis and the growth has refused to spread to other parts of the state. This implies that in every square kilometer within the Lagos metropolitan area, there are 20,000 people on the average, with the occupancy

ratio of about 8-10 person per room. Most of the problems associated with Metropolitan Lagos are consequences of harboring such a large population within such a limited land area (Rasaki 1988).

Problems of the Lagos Mega City

UNHABITAT (2008) argued that the classic manifestation of a Mega city in developing countries is so evident in Lagos because of the haphazard spatial population growth without any corresponding expansion in housing, infrastructure, services and livelihood opportunities. Environmental problems are so widespread in Lagos and are compounded by traffic congestion, pollution (Noise, atmospheric and water), and flooding and ocean surge (Oduwaye 2009). Slums growth rate in Lagos is reported to be two times higher than the average population growth rate in Nigeria and many planned communities have been invaded by shanties and informal settlements, this along with the general poor quality of housing and infrastructure, lack of proper drainage systems and sea defenses as well as poor disaster preparedness has weakened the ability of Lagos to mitigate the impacts of climate change. As such, Lagos from time to time witness environmental hazards such as floods, ocean surge and building collapse. Poor neighborhoods are even particularly more vulnerable to these hazards (Oduwaye 2009; UNHABITAT 2010). “Area boys” (hoodlums) are everywhere in Lagos disrupting social order. The widespread of extortions, violent crime, ethnic clashes and land disputes in Lagos are attributable to the prevalence of these miscreants. Declining health due to poor living condition, widespread of diseases and epidemics among children and women are also among the many problems of the Lagos mega city (Oduwaye 2009). In view of the aforementioned, it is evident that the problems of the Lagos mega city are multidimensional. They cut across economic, socio-cultural and environmental spectra of the state leaving the most vulnerable of the population with much of the pains.

Overview of Efforts to Solve the Problems of Lagos Mega City

The Bubonic Plague of 1925 – 1930 that followed the World War I and claimed many lives prompted the colonial government to enact the Lagos Town Planning Ordinance and subsequently the Lagos Executive Development Board in 1928. The board was to ensure building plans are preapproved and conform to specified standards and to carry out a massive sweep of slum settlements and resettle the residents of such settlements. However it was not until 1972 when Lagos State was created that notable urban planning policies began to take place. Since then several decrees and acts have been enacted and agencies and corporation established to facilitate improvement of livability of Lagos.

Among the many policies are: the 1982 Town and Country Planning (Building Plans) Regulations; establishment of Guidelines for Approval of Layout in 1983; Urban and Regional Planning Law Decree 88 of 1992 and the establishment of The Lagos State Physical Planning and Development Authority among others (Oduwaye, 2009; Francisco 2006). All these were to manage growth and control housing and infrastructural development in Lagos in order to alleviate urban problems.

Despite all the many regulatory initiatives of the various administrations to solve the urban problems confronting Lagos, the problems still persist, especially in the face of the unexpected population explosion. New settlements that were developed by individuals with no proper layout and no allowance for proper placement of infrastructure such as roads and drainage system now posed a big infrastructural development challenge thus necessitating the need for a new kind of proactive policy measure to address the problems as they surface and plan for the future. This

proactive policy is the new town program. The question is how effective has the new town program been?

Analysis of the Effectiveness of the Lagos New Town Policy

In order to answer the above question, analysis was carried out using information obtained through a household survey of new town residents in Lagos Nigeria that was conducted in the summer of 2012. One hundred surveys were distributed randomly through the estate managers of each of the new towns surveyed and thirty five of the surveys were returned. The total 35 (n = 35) survey returned were valid as the residents answered the questions to the best of their abilities. Out of these 77.1 percent of the participants are male and 22.9 percent are female; 63.3percent of the respondents have lived in the new towns for less than 11 years and only 8.6 percent have lived in the estate for more than 45 years while 25.7% have lived there between 11 – 20 years. The age of the majority of respondents ranges between 18 to 60 years with 82. 9% of them in that age bracket and only 17.1% in the 61 and above age bracket. The results and discussion of the data analysis are presented below.

Congestion problems and new town policy effectiveness

As a point of departure, participants were asked if they think congestion is a problem in Lagos. Interestingly, as shown in Figure 4.1, 76.5% of them answered yes and only 11.8% answered no. Further, satellite towns' residents were asked if they are aware of the ongoing new town development program in Lagos and whether or not they think the new town program has so far been effective in solving congestion problem in Lagos. As shown in Table 4.1, 73.5% proclaimed knowledge of the program while 26.5% of the respondents said they are unaware. However, only

about 36% of the people who said they were aware believed that the new town is or may have been effective in solving congestion problem in Lagos and approximately 64% of them think it is not really or not at all effective. Also, of those who are unaware of the program, only 33% think the satellite town program may have somehow helped solve congestion problem while approximately 67% of them disagreed that the program has in any way been effective in solving the congestion problem. Overall, 50% of the respondent agreed that the satellite town is not really effective and only 14.7% think it is absolutely effective.

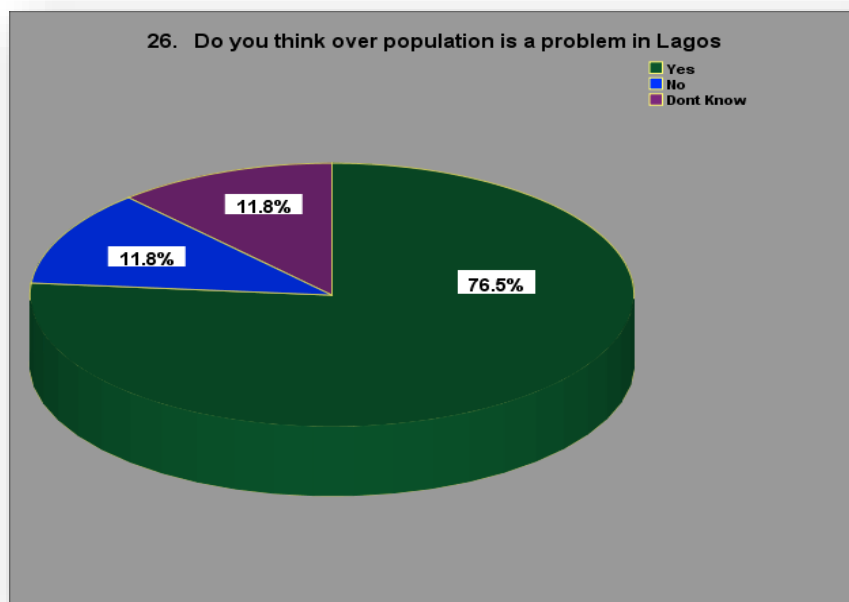


Figure 4.1: Over Population in Lagos

Table 4.1

Cross Tabulation of Awareness and Perception of the Effectiveness of Satellite Towns

Awareness	Satellite Town Effective?				
	Absolutely	Maybe	Not Really	Definitely No	Total
Yes	20%	16%	52%	12%	73.5%
No	0%	33%	44.4%	22.2%	26.5%
Total	14.7%	20.6%	50%	14.7%	100%

Residents' response to whether or not the satellite town project has so far been effective in solving congestion problems in Lagos as independently graphed and presented in Figure 4.2 shows that 48.6% of the people think it is not really effective. Also, when the question is redirected and residents were asked if they think the new towns can help reduce congestion in Lagos, their response as graphed in Figure 4.3 indicates that more than half of them were unsure of any possibility that the new town can have any significant impacts on the problem of congestion in Lagos.

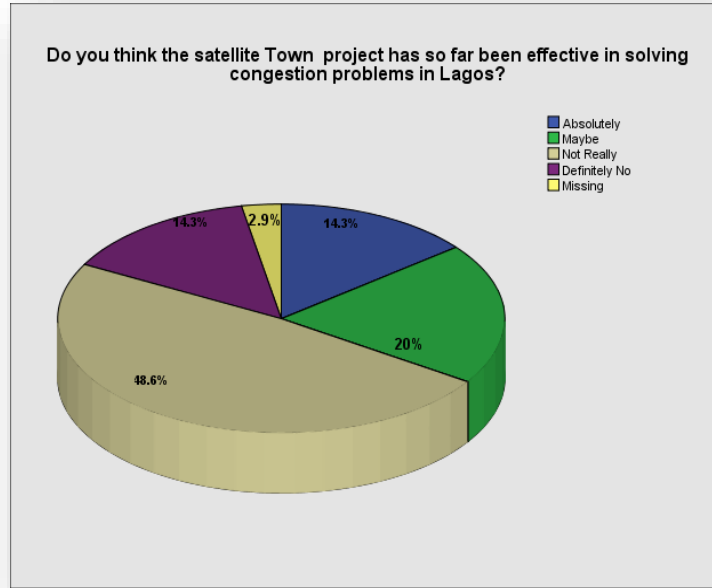


Figure 4.2 Effectiveness of New Town Policy

The continuing problem of congestion in Lagos can be seen at several levels. First is the high population growth and density. Table 4.2 shows the population density of Lagos State from 1866 to 2006. Within a span of 140 years, the population had grown from merely 2,500 people to 17,522,942. It is noteworthy that in 1963, the entire Lagos state was covering a total area of 69.9 square kilometers, having population of 272,000 people. By 2006 however, the state had spread spatially more than five times to cover an area of 357.28 square kilometers but the population had grown in a much greater rate relative to the land area - more than 60 times, from 272, 000 to 17,522,942 between 1963 and 2006.

Table 4.2

Lagos State Population Growth and Density 1866 – 2006

YEAR	AREA (SQKM)	POPULATION	POPULATION DENSITY
1866	-	25000	-
1901	-	40000	-
1921	46.60	73766	1582.96
1932	52.30	99690	1906.12
1952	69.90	126108	1804.12
1963	69.90	272000	3891.27
2006	357.28	17522942	4898.40

Adapted from Lagos State Bureau of Statistics: Lagos Household Survey (2010); Ilesanmi (2010)

Table 4.3 Lagos State Population Growth and Density by Local Government

LOCAL GOVERNMENT AREA	LAND MASS (SQKM)	WATER AREA (SQKM)	TOTAL (SQKM)	population 2006	population 2010	population SqKm (2006)	population SqKm (2010)
AGEGE	17	0	17	1,033,064	1,165,977	60,768.47	68,586.89
AJEROMI/IFELODUN	13	0.9	13.9	1,435,295	1,619,959	103,258.63	116,543.80
ALIMOSHO	137.8	0	137.8	2,047,026	2,310,395	4,855.05	16,766.29
AMUWO/ODOFIN	153	26.1	179.1	524,971	592,513	2,931.16	3,308.28
APAPA	25.5	13	38.5	522,384	589,593	13,568.42	15,314.12
BADAGRY	363	80	443	380,420	429,365	858.74	969.22
EPE	641	324	965	323,634	365,272	335.37	378.52

Table 4.3 Continued

LOCAL GOVERNMENT AREA	LAND MASS (SQKM)	WATER AREA (SQKM)	TOTAL (SQKM)	population 2006	population 2010	population SqKm (2006)	population SqKm (2010)
ETI-OSA	154.1	145	299.1	983,515	1,110,053	3,288.25	3,711.31
IBEJU-LEKKI	643	10	653	99,540	112,347	152.43	172.05
IFAKO/IJAIYE	43	0	43	744,323	840,087	17,309.84	19,536.91
IKEJA	49.92	0	49.92	648,720	732,184	12,995.19	14,667.14
IKORODU	200	145	345	689,045	777,697	1,997.23	2,254.19
KOSOFE	74.4	10	84.4	934,614	1,054,861	11,073.63	12,498.35
LAGOS/ISLAND	5.2	4.06	9.26	859,849	970,476	92,856.26	104,803.07
LAGOS/MAINLAND	19.62	0	19.62	629,469	710,456	32,083.03	36,210.80
MUSHIN	14.05	0	14.05	1,321,517	1,491,542	94,058.15	106,159.59
OJO	163	19	182	941,523	1,062,659	5,173.20	5,838.78
OSHODI/ISOLO	41.98	0	41.98	1,134,548	1,280,518	27,025.92	30,503.05
SHOMOLU	12.1	2.5	14.6	1,025,123	1,157,014	70,213.90	79,247.57
SURULERE	27.05	0	27.05	1,274,362	1,438,320	47,111.35	53,172.66
TOTAL	2797.72	779.56	3577.28	17,552,942	19,811,289	4,906.78	5,538.09

According to Selvanayagam (2012), Lagos is growing at the rate of 2,000 residents everyday with Mushin, Agege, Lagos Island and Shomolu areas as the top recipients of this population growth. Table 4.3 shows population and densities in all local government areas of Lagos state between 2006 and 2010. This table gives a vivid picture of the spatial variation in population growth rate and density among communities in Lagos state. For instance, the table shows that, although Ajeromi/Ifelodun, Mushing, Shomolu, Oshodi/Isolo and Lagos Island Local Governments

are among the least in land mass area coverage, they accommodate the largest share of the population. These local government areas consist of the major metropolitan Lagos with population density ranging from well over 155,000 people per square kilometer in Ajeromi/Ifelodun local government to 30,503.3 people per square kilometer in Oshodi/Isolo as against the statewide population density average of 5,538.09 in 2010. Also, the population figure between 2006 and 2010 shows that Mushin grew at the rate of 116.5 persons per day while Lagos Island was growing at the rate of 75.8 persons per day.

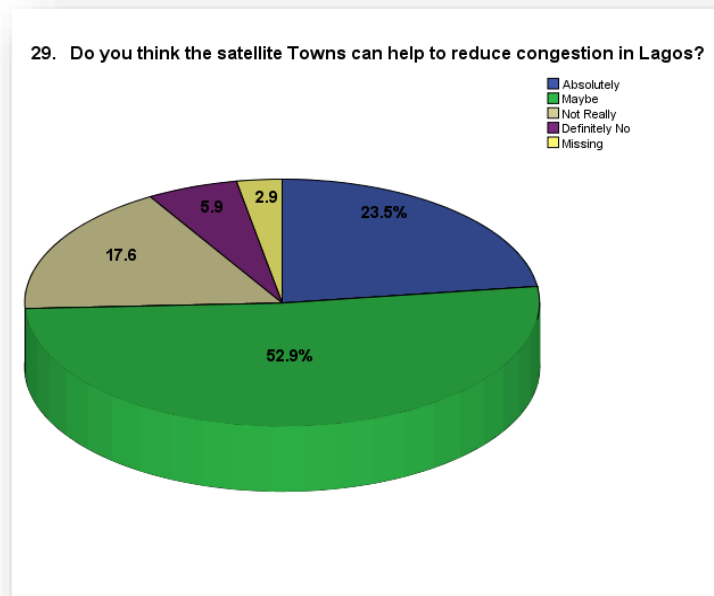


Figure 4.3: Effectiveness of New Town Policy in Reducing Congestion in Lagos

Second is the rate of population growth (between 6 to 8 per cent) in Lagos relative to housing, water supply, and drainage is worrisome. In terms of housing, for example, Oshodi (2010) reported that the combined stock of all the housing policies of the Lagos state government (New town Policy inclusive) is less than 5,000 units per annum, whereas the population growth rate requires 500,000 units annually to compensate for the deficit in housing stock over the next 10 years.

Third is the traffic congestion that threatens the ease of mobility. Lagos Ministry of Economic Planning and Budget 2010 household survey revealed that only 18% of the people surveyed considered the traffic situation to be good, 50% rated it as fair while 32% considered it bad. Traffic jam popularly called “Go-slow” is a daily experience of the majority of Lagos workers and, according to the survey, high volume of vehicular movement as well as the poor condition of the roads are the main reasons cited as the cause of the traffic problem in Lagos (Lagos Bureau of Statistics 2010).

Evidence from this research shows that the new town policy has so far had some positive impact in the redistribution of the population through the establishment of entirely new towns and the creation of new communities of residents. Although the determination of the level at which the new town policy has contributed to the spatial spread of population in Lagos is beyond the scope of this research, the growth of the City of Lagos, and the spread of the population across the state boundaries, including existing new towns and areas around them are evidence of this impact. However, the policy has failed to be effective in providing affordable accommodation for the most vulnerable, the bulk of the population that lives the slum scattered everywhere in the state. This is especially so given the dynamics of land area/capacity in Lagos and the unending influx of people which has made the city popular as the most congested city in Africa, it has never been clearer that

the NTDA and its population spatial redistribution objective can only do little until the city reaches its maximum density capacity.

In view of the foregoing, it is fair to say that after three decades of new town development during which more than 100 new town projects of which more than 50% (54) are fully developed; congestion still remains a problem in Lagos. Both private and public housing programs have fallen short of housing demands and proved *ineffective* in producing any visible and lasting solution to the problems of overpopulation and congestion in Lagos. The continuous influx of migrants is promoting the growth of slums and shantytowns and the neglect of old inner cities which are in a perpetual state of disrepair continues unabated.

Cost and Composition of Living in the New Towns

An attempt was made to determine how affordable it is to live in new towns in order to see whether the new towns are actually a tool for correcting socio-economic imbalance in Lagos. This was done by analyzing respondent's answers to questions related to their income, cost of living in their estate and what they think about the process of acquiring land or house in the government estates.

Table 4.4

Cross Tabulation of Income and Living Cost

Living cost	Income class		
	Upper class	Middle class	Low class
Very High	63.6%	30%	0%
High	27.3%	30%	100%
Moderate	9.1%	40%	0%

When describing the cost of living in the estates, there appears to be a variation in the response of all the various income class. This indicates that, there is no relationship between residents' income status and their perception about the cost of living. As shown in table 4.4, 63.6% of the upper income class respondents rated the cost of living as very high while the majority of the middle class (40%) considered the living cost to be moderate and 100% of the low income class thinks the cost of living in their estates is simply on the high side. Hence, all participants irrespective of their income status think very differently about the cost of living in their estates. Generally though, 37.1% of the people considered the cost of living to be very high, and only 28.6% considered it to be moderate (Figure 4.4).

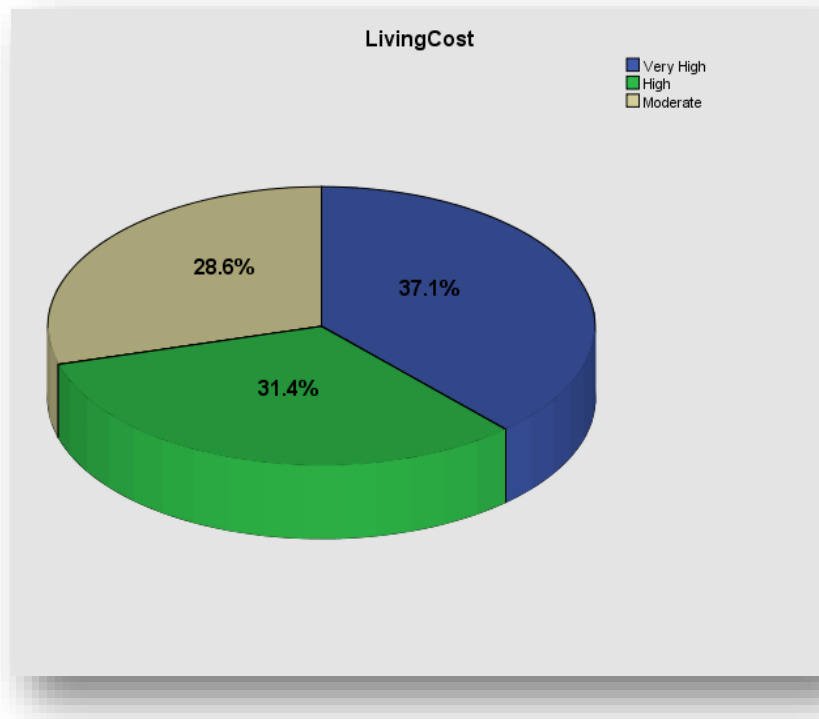


Figure 4.4: Cost of Living within New Towns

In another related analysis, when new town residents were asked what they think about the process of acquiring land or house in the government estates (“government estates” was used as a substitute for new towns in the survey because that is how most residents identified new towns). Their response as shown Table 4.4 below, indicates that 50% of the of the upper income respondents think it is difficult while 60% and 100% of the middle and low income respondents claimed that it depends on who you know within the government agencies. When this is graphed independently in Figure 4.5, a total of 54.5% of the people claimed that buying land or house from government depends on who you know while 33.3% said it is simply difficult and only 12.1% agreed that it is

a simple process. This indicates that people's income status did not influence their perception of the process of acquiring properties from the government

Table 4.5

Cross Tabulation of Income and Government Property Procurement Process

Income	How easy to buy government property		
	simple	difficult	Depends on who you know
Upper class	20%	50%	30%
Middle class	10%	30%	60%
Low class	0%	0%	100%

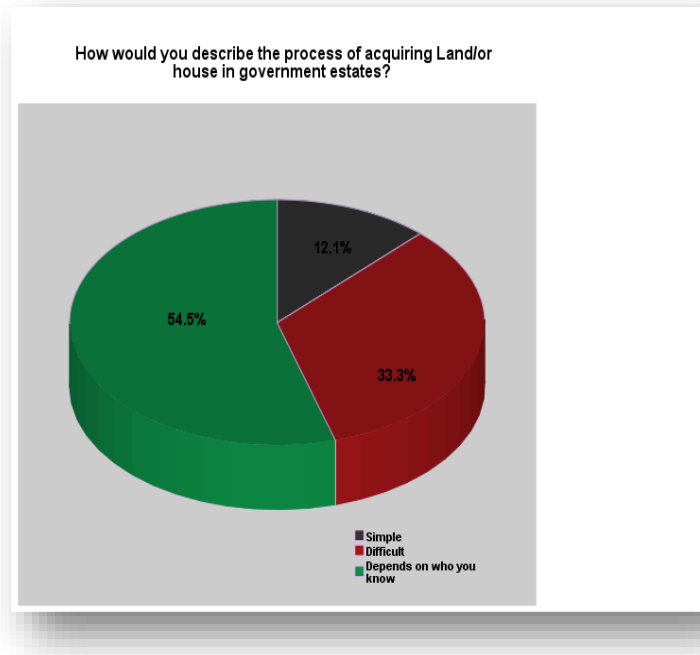


Figure 4.5: How Easy to Buy Land or House from Government Estates

This analysis showed clearly that the cost of living within new towns are very high and that the process of acquiring land and/or housing properties within the new town is mostly cumbersome and in many instances depends on personal relationship with officials within the political system. This is so because lack of transparency, bureaucratic bottlenecks and corruption are known political problems in Nigeria.

On the one hand, more often than not, public officials in Nigeria use the power of their offices to jump established rules and regulations in order to gain undue access to public services and facilities for themselves, their families and friends. On the other hand, people without any connections within the agencies and those who are unable to pay their way to get services expedited are usually made to wait and their applications often left unattended and eventually discarded. Anyone who had sought public services that require some kind of formal application and enlistment processes in

Nigeria is very much likely to have experienced the situation described above. This is likely the case with respondents' experiences in the acquisition of properties in the new town that prompted such response.

Again, according to NTDA the government does not provide any financial assistance for initial infrastructural development and the design of new towns. As a result, the agency relies solely on Capital Development Levy (CDL) which is the initial down payment that must be paid by anyone to whom property is being allotted in the new town before any development takes place. Currently, the CDL stands at 70 to 80 per cent of the cost of the land. This is unaffordable for low and medium income class families who may be interested in acquiring land in the new town.

The unintended effect of the above situation is that many of the people who are able to procure these properties either because of their political connections and/or their ability to pay the CDL are speculators. Many of these speculators do not comply with the 2-year maximum period set by the NTDA during which every land allocated must be developed. Rather, they often wait for the land value to go up and then resell at exorbitant rates. In situations like this, the activities of these speculators often lead to the surge in prices of land and housing for all properties in the new towns making them unaffordable for the poor and as a result, a hike in the general cost of living in the area.

Infrastructure Situation

Here analysis was carried out to answer the following the question: Does living in the new town make a significant difference in households' living condition and access to services and infrastructure? In the effort to provide answer to the above question, residents were asked to rate the efficiency of infrastructure in their estates and their response is presented in Table 4.6.

Table 4.6

Residents' Assessment of the State of Infrastructure

Infrastructure	Very Good (%)	Good (%)	Fairly Okay (%)	Poor (%)
Electricity	0	26.5	8.8	64.7
Transportation	0	35.3	47.1	17.6
Security	27.3	6.1	36.4	30.3
School	0	15.2	39.4	45.5
Road	11.8	29.4	35.3	23.5
Water	32.4	5.9	5.9	55.9

The analysis shows that an overwhelming 64.7% and 55.9% of the people were not satisfied about the state of electricity and water in their estates. Generally, majority of the people expressed some level of dissatisfaction with the state of infrastructure in their estates. From the table, one can conclude that even though transportation and schools were not perfect, people appeared to be relatively satisfied compared to electricity, security, road and water. Further evidence from Table 4.8 below suggests that most people commute to work by personal mode of transportation (driving; 71%) in which case they may be less particular about public transportation.

The finding of this research suggests that the Lagos new town policy has not been effective in improving infrastructural access for its residents. An overwhelming majority of the respondents decried the state of infrastructure in their estates as below acceptable, many of them rated

electricity, water and road infrastructure poorly.

Interestingly, a similar research carried out by the Lagos State Bureau of Statistics, a department of the Lagos State Ministry of Budget and Planning in 2010 reveals that the general state of infrastructure in Lagos state is not so good. Of the household surveyed, 48% indicated having electricity for less than 5 hours per day while only 2% said they get electricity supply between 21-23 hours per day. Overall, 90% of the people expressed dissatisfaction with the state of electricity in their area, in the same survey, 71% of the people whose houses have road accessibility by car expressed dissatisfaction with the condition of roads indicating bad road surface, poor drainage and obstructed sidewalks as the main reasons (Lagos State Government 2010). This situation is rather puzzling given the fact that Lagos received the second largest infrastructural investment in Nigeria, after Abuja the capital city (Oduwaye 2009).

For much of Lagos, power sources and transformers have been tasked beyond capacity and as a result, these transformers often explode leaving entire communities in a total blackout. In order to avoid such gridlock, some neighborhoods have resorted to electricity rationing so as to reduce the effect of overloads on the transformer. In other neighborhoods all around Lagos, (in and out of the new towns) persistent power outage has become part of daily living and the use of gasoline generators has now become the primary source of electricity in most households that can afford such. Hence it is fair to say that living in the new town does not make much of a difference in the quality of infrastructure enjoyed since the state of infrastructure is the same in and out of the new towns based on assessment of the residents.

Location of Jobs and Journey-to-work Trip

The research also attempted to determine where new town residents' jobs are located, in order to test whether or not the new towns are truly dependent and able to provide jobs for the residents. The graph Figure 4.6 indicates that more than 36% of the respondents travel 20 kilometers or more to work every day and only 9.1% of them travel between 10 – 20 kilometers. Of the people who travel as far as 20 kilometers or more to get to work, over 91% of them spend more than 1 hour on the road and even 57.1% of those who commute under 10 kilometers still spend as much as 30 to 40 minutes to get to work (Table 4.7).

Table 4.7

Cross Tabulation Showing Respondents' Daily Time and Distance Travel to Work

Distance travel to work (Km)	Time Travel to Wok (Minutes)			
	10 – 20	30 –40	45 – 55	60 or more
1 – 5	100%	0%	0%	0%
6 – 10	42.9%	57.1%	0%	0%
10 – 20	18.2%	18.2%	18.2%	45.5%
20 or more	0%	8.3%	0%	91.7

Table 4.8

Residents' Mode of Daily Commuting

Mode of transportation	Time Travel to Wok (Minutes)			
	10 – 20	30 –40	45 – 55	60 or more
Driving	24%	10%	8%	48%
Bus ride	20%	40%	0%	40%
Walking	100%	0%	0%	0%

Longer travel time is attributable to traffic congestion which is so pervasive everywhere in Lagos. The fact that lager percentage of the respondents travel longer distance (at least 10km; fig. 4.6) to work shows that the jobs are located outside the new towns - at least some 10 – 20 kilometers away. This is against one of the very important premise for the creation of new towns, which is to create a balance between jobs and population, such that the new towns are independent of the older city and can provide employment for its residents (Perloff and Sandberg 1972

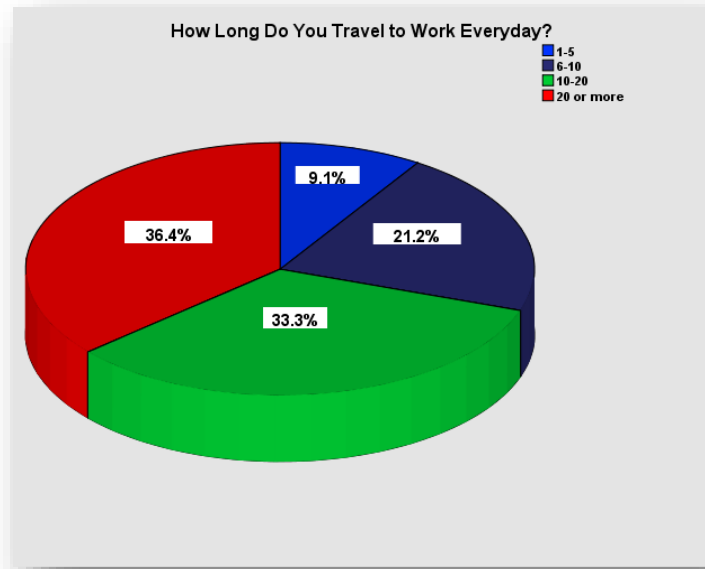


Figure 4.6: Travel Distance between Home and Work

Table 4.9

Cross Tabulation of Estate and Distance Travel to Work

Estate	Distance travel to work (kilometers)			
	1 – 5	6 – 10	10 - 20	20 or more
Ikorodu	18.2%	0%	36.4%	45.5%
Magodo	7.7%	23.1%	15.4%	53.8%
Lekki	0%	44.4%	55.6%	0%

Finally, from Table 4.9 above, it is interesting that 45.5% of the residents of Ikorodu new town surveyed claimed to travel 20 kilometers or more to work every day, which is pretty much the same

distance between the metropolitan Lagos and the Ikorodu new town. Also, 53.8% of the respondents in Magodo travel the same distance to work while the majority of Lekki residents only travel between 10 – 20 kilometers to work. Going back to chapter three (page 66) of this thesis, the areal measurement of the distance between all these estates and the central city suggest that the distance travelled by the majority of the respondents is the same as the distance between the estate and the central city. This suggests that the majority of the residents still have their employment around or within the central city, suggesting that the estate where respondents live determines the distance they will travel to get to work.

If the new towns are truly independent and can adequately provide jobs for the inhabitants, less people would have had to travel such long distance to work. It is clear from the analysis that the majority of new towns residents work outside the new town, at least some one hour journey away from their residence.

To be sure, the effectiveness of new towns is hinged partly on their ability to engender spatial socio-economic balance by attracting people and economic activities from the inner cities to the new towns. In the case of Lagos new towns however, this has not been the case. The existence of new town has not had any real impact in reducing spatial socio-economic imbalance that exists in Lagos. The inner cities still remains the daily destination for the majority of Lagos workers including those who reside in the new towns.

Conclusion

From all the analysis carried out in this chapter, it is fair to conclude that the Lagos new town policy has not been effective in managing growth and congestion in Lagos. The following chapter will summarize the findings of this research and offer recommendations for policy and further research.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Introduction

This thesis set out to evaluate the effectiveness of the new town policy of Lagos, Nigeria. In doing this relevant literature was reviewed, appropriate methodology was established and relevant data were collected analyzed and discussed. This chapter presents the summary of the literature and methodology, conclusions, and recommendations for policy and future research.

Summary

One of the dramatic changes in urban growth over the past few decades has been the growth of megacities in parts of the world that have fewer resources to manage the growth of these cities. These have led to many physical, environmental and socioeconomic problems, and the continuous search for solutions to deal with those problems. Review of relevant literature focusing on the role of the city, theories of urban growth, historical pattern of urban growth, and problems and solutions of urban growth and solutions showed that

- i. Many of the rapidly growing cities in the twenty first century are now in developing countries
- ii. In contrast to the developed nations where urban growth came as a result of economic growth, urban growth in developing countries is predominantly a product of rural-urban migration.

- iii. This dynamic has worsened the woes of cities in developing countries and presented myriads of policy challenges to the metropolitan government in those cities.
- iv. One of the policy solutions that have been adopted to deal with urban growth problems has been the new town policy. First adopted in the UK and then the United States, the policy has since spread to developing regions including South America, China, and Africa. While the effectiveness of this policy has been mixed, it is still in full force in many developing countries, sometimes without any effort to evaluate its effectiveness.

Against this background, this thesis proposed to evaluate the effectiveness of Nigeria's new town policy, which was adopted in 1981 to deal with the urban growth problems of the megacity of Lagos. Specifically, the thesis proposed to evaluate the policy in terms of congestion in the central, and cost of living and affordability, location of jobs, and infrastructure situation in the new towns compared to the central city.

To accomplish this, a survey of 100 residents was conducted in three developed new towns of Lagos: Lekki, Magodo and Ikorodu, through distribution of questionnaire, but only 35 completed questionnaires were returned. Using SPSS software, the cross tabulation analysis of survey responses was carried out based on four scenarios: congestion problems, cost and composition of living in the new towns, infrastructure situation, and location of jobs and commuting.

Conclusion

The results of the analysis show that while the new town policy may have been instrumental in the spatial redistribution of population in Lagos, it has not been effective in achieving a number of its goals.

1. Congestion is still a major problem. Both private and public housing programs have fallen short of housing demands created by the continuing influx of migrants into the city. As a result, increasing population and vehicular density is threatening mobility (Fig. 5.1), slums have proliferated (Fig. 5.2), social vices have infiltrated and poverty escalated.



Figure 5.1: Vehicular Traffic and Congestion Situation in Lagos (Source: <http://smartercitieschallenge.wordpress.com/category/lagos-nigeria/>)



Figure 5.2: Slum Life in Lagos (Source: Edwards, A. 2012)

2. The cost of living within new towns is very high making the new towns unaffordable for the majority of the residents of Lagos. In particular, the process of acquiring land and/or housing properties within the new town is mostly cumbersome and in many instances depends on personal relationship with officials within the political system, making them inaccessible and unaffordable for the poor. This has made the new towns ineffective as a tool for correcting socio-economic imbalance in Lagos.

3. The new towns still remain massively dependent on the central city because most of the residents still have their employment around the central city. As such, the policy has not helped to ease the burden of congestion and reduce spatial, social and economic imbalance in metropolitan Lagos.
4. Poor road condition, epileptic power supply, inadequate sewage and sanitary systems have remained persistent problems in Lagos. Decades of new town development have not produced any real outcome in improved infrastructure, both within the new towns and all across Lagos.

Policy Recommendations

Congestion and the New Town Policy

While the new town policy is not bad in itself, it will be beneficial if it is combined with other social housing programs that can cater for the needs of the low income class. At the same time, the process of new town development should be complimented with the redevelopment of the decaying older city such that the government of Lagos can gradually undo the menace of the hitherto unplanned development that has engulfed the state at every spatial scale. Proactive efforts should be channeled at removing all the slums and informal settlements that have deface Lagos through:

- I. A system that will integrate government social housing program with community-level involvement to harness community needs and public resources in a way that will produce desired outcome for the benefit of all.
- II. Efforts to identify ways to provide decent accommodation for slum dwellers in a way that shows a sense of responsibility and commitment. Extensive civic engagement in future housing programs which must be reflected in transparent governance and local

control and allocation of lands and houses through a well-coordinated bottom up approach to policy implementation.

III. Combine federal and state government effort in solving the housing problem.

Cost of Living and Affordability of the New Towns

It is imperative to mention that the real impact of housing congestion crises in Lagos is being and will continue to felt across Nigeria. It is in the interest of the government to provide technical and financial assistance to Lagos government at all levels in resolving the problem to build affordable low cost houses for the low income people. Also, because profit objective and government social welfare programs are always conflicting, it is important to create a clear divide between these two goals in any government program. This is especially important considering the fact that many of the lots in the hitherto completed satellite towns are allocated in lump sums. This allows businessmen and private developers many of whom are speculators to take advantage of the program for financial gains making the value of the property skyrocket within a short period of time. As long as this trend continues, the problem of congestion in Lagos will remain, with low income people cramping in scattered settlements with low standards and poor living conditions. To solve this problem, government should develop a quota system that allows land to be allocated to both private companies and individuals, including low income individuals. This should be accompanied by enforceable subdivision regulations to ensure that structures built on the land are up to standards.

Infrastructure

The problem of infrastructure is very endemic in Lagos and the solution requires extensive public investments in new technology, especially with the generation and distribution of electricity. Problems of road infrastructure could be tackled by enforcing the existing law relating to the timely payment of Capital Development Levy (CDL), such that any allottee fail to pay the full CDL amount may have their properties forfeited and resold. This will help accelerate the raising of sufficient revenue for the construction of roads and other infrastructural projects for the benefits of all the residents.

Location of Jobs and Commuting

As new towns are planned and designed, it is important that the government take into consideration the need to incorporate in the design, those infrastructural elements that will encourage new businesses to flourish. This may include some kind of incentives programs for those investments that have the potential to create jobs for the residents.

Finally and perhaps most importantly, the researcher strongly believe that Lagos will benefit a great deal from regional collaboration in housing, infrastructure and economic programs that are tailored to the common interests of Lagos and its surrounding states. Normally, if migrants all across Nigeria see Lagos as the singular destination for economic prosperity in this era of unregulated internal migration system, the natural outcome is for Lagos to remain perpetually congested. Under such circumstance, a backwash effect as discussed in chapter two of this thesis is very much on the horizon. This is because as other regions continue to lose their population to Lagos, they will lag in development and since Lagos the destination does not have sufficient capacity to absorb this

unending influx, hardships will continue to increase both for Lagosians and the new migrants. On the other hand, cooperation and collaboration with surrounding states on housing and infrastructure and economic programs will help produce regional policy agenda that can drive regional development. As such, when life get more and more unbearable in Lagos due to increasing cost of living and poor living conditions; people will consider migrating to the neighboring states which offer similar potentials for economic prosperity as Lagos and thus reduce congestion and hardships in Lagos.

Future Research

The major constraints of this research were time and finance. Due to lack of sufficient time and finance, the researcher could not attain the desired level of response from the survey. Out of 100 questionnaires distributed, only 30 were returned and there was no time to track down individual respondents to retrieve the remaining questionnaires or redistribute additional ones. This number was too small for any analysis that can help establish significant relationship among variables that have direct linkage to the satellite towns and make any valid generalization. Therefore, there is need for an extensive research that will be able to collect all relevant to analyses relationships and make valid generalizations.

Although there are no data available to trace the origin of the population that make up the residents of the new town, the fact that the population density in the inner city has not reduced since the inception of the new town policy is an indication that these populations are possibly from other region within the state or outside of the state. A skillfully designed survey will be a very vital tool to explore all the details that this research could not explore and for which secondary data are limited. Finally, in future research, it will be worthwhile investigate other social housing programs globally that have proved more effective in solving the congestion and infrastructure problems of mega cities.

Appendix A

Research Script
Western Michigan University
Department of Geography

Principal Investigator: Benjamin Ofori-Amoah
Student Investigator: Olanipekun Abolaji Samson

Title of Study: Saving The Lagos Mega City: An Assessment Of The Satellite Town Project And Population Spatial Redistribution In Lagos Nigeria

Research Script

Hi,

My name is Olanipekun Abolaji Samson; I am a student at Western Michigan University currently working on my Masters Program. I am interested in the problems of over population and congestion in the Lagos mega city and as part of the requirement for my master's degree, I am currently conducting a research entitled: Saving The Lagos Mega City: An Assessment Of The Satellite Town Project And Population Spatial Redistribution In Lagos Nigeria.

To this end, I have designed some questionire to get your opinion on this project. The questions are straightforward, and will only take 20 minutes to answer. Your participation is entirely voluntary and if you choose to end your participation at any time during the exercise, there will be no further questioning.

Any question that you may have in the future can be directed to Dr Benjamin Ofori-Amoah on +1269-387-3424 ben.ofori@wmich.edu or the student investigator, Olanipekun Abolaji Samson on +1269 290 5273 abolajisamson.olanipekun@wmich.edu.

Would you be willing to participate in this survey? Yes No

Appendix B

Consent Letter

Western Michigan University

Department of Geography

Principal Investigator: Benjamin Ofori-Amoah

Student Investigator: Olanipekun Abolaji Samson

Title of Study: Saving The Lagos Mega City: An Assessment Of The Proposed Satellite Town Project And Population Spatial Redistribution In Lagos Nigeria

You are invited to take part in the research entitled: **Saving the Lagos mega city: an assessment of the satellite town project and population spatial redistribution in Lagos Nigeria**. The research is a partial fulfilment of the award of a Master's degree in Geography at Western Michigan University. The objective of this research is to determine how the effectiveness of the satellite towns in solving the problems of over population and congestion in the Lagos mega city.

Your participation in this survey is voluntary and no name or any other personal information is required. If you choose to answer the following questions, please be sure not to write your name and address on the survey paper, when you finished answering the questions please return the completed survey to the student investigator. You may also choose to discontinue your participation at any time during the survey process. If after submitting your answer, you wish to cancel your participation, please feel free to inform the student investigator and your response will be removed from the database. Otherwise, a returned survey indicates your consent for the student investigator to use your answer in the study. Any question that you may have in the future can be directed to Dr. Benjamin Ofori-Amoah on +1269-387-3424 ben.ofori@wmich.edu or Olanipekun Abolaji Samson on +1269 290 5273 abolajisamson.olanipekun@wmich.edu.

You may also contact the Human Subjects Institutional Review Board via phone at +12693878293 or office of the vice president for research at +1269 387 8298.

This consent document has been approved for use for one year by the Human Subjects Institutional Review Board (HSIRB) as indicated by the stamped date and signature of the board chair in the upper right corner. Do not participate in this study if the stamped date is older than one year.

Human Subjects Institutional Review Board
210W Walwood Hall
(269) 387-8293
research.compliance@wmich.edu

Office of Vice President for Research
210W Walwood Hall
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WESTERN MICHIGAN UNIVERSITY



Human Subjects Institutional Review Board

Date: March 15, 2012

To: Benjamin Ofori-Amoah, Principal Investigator
Abolaji Olanipekun, Student Investigator for thesis

From: Amy Naugle, Ph.D., Chair

Re: HSIRB Project Number 12-03-07

This letter will serve as confirmation that your research project titled "Saving the Lagos Mega City: An Assessment of the Proposed Satellite Town Project and Population Spatial Redistribution in Lagos Nigeria" has been **approved** under the **exempt** category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note that you may **only** conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. In addition if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: March 15, 2013

Walwood Hall, Kalamazoo, MI 49008-5456
PHONE: (269) 387-8293 FAX: (269) 387-8276

Appendix C

QUESTIONNAIRE

Please circle your answer to the following questions

Housing and job

1. What is the name of the estate where your house is located? _____
2. In what local government area do you live? _____
3. What year did you move in to this estate? _____
4. What kind of house do you live in? Duplex Flat face-to-face
5. Do you own or rent the house? Own rent
6. How will you rate the cost of housing in this estate? High Moderate Low
7. How would you rate your family's economic status?

Upper class middle class low class

8. How many people live in the same house? 1-5 5-10 10 or more
9. Do you like living here? Yes no indifferent
10. How far do you travel to get to work every day? 1-5km 6-10km 10- 20km
20km or more
11. How do you transport to work? Drive transit bike walk
12. Are you satisfied with your job? Yes no indifferent
13. Would you still keep the same job if you have to live farther away? Yes no not sure

Infrastructure and services

How would you rate the following amenities in your area? (Please circle as appropriate)

14. electricity very good good fairly ok poor
15. water supply very good good fairly ok poor
16. road very good good fairly ok poor

- | | | | | |
|--|-----------|------|------------|------|
| 17. transportation systems | very good | good | fairly ok | poor |
| 18. Security of lives and properties | very good | good | fairly ok | poor |
| 19. public schools | very good | good | fairly ok | poor |
| 20. are there slums and informal settlements in this estate? | | | Yes | No |
| 21. Do you think over population is a problem in Lagos | Yes | no | don't care | |

THE NEW TOWN

Please circle as appropriate

22. Are you aware that the government is creating more satellite town?
Yes No
23. Did the government official contact you for your opinion about this?
Yes no
24. Do you think the New Towns can help to reduce congestion in Lagos?
Absolutely maybe not really definitely no
25. If the government sell or offer houses and/or Land for rent in the satellite towns, will you consider acquiring one? Yes no don't know
26. If you are asked to relocate from here, will you? Yes no don't know

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