

# Urban Planning Implications of Changing Land Use Structure of Metropolitan Lagos, Nigeria

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## 1 ABSTRACT

The changing land use structure of metropolitan Lagos has many implications on the land use prospects of the city. The nature of the implications manifests in various shades of socio-economic, physical and environmental dimensions. This paper unravels the different dimensions of the changing land use and their implications on land use development of the city. The paper discusses the nature of the changes and their implications on land use type's namely residential, commercial, industrial, educational and institutional, religious, circulation, parks and recreational land uses. The research methodology involved the collection of primary and secondary data. Data were collected on determinants of urban land use which the paper classified into economic, sociological, cultural, environmental, infrastructure and institutional factors. A total of 755 questionnaires were administered to collect data on determinants of land use in order to establish their influence on Lagos changing land use structure. The application of factor analysis and principal components analytical techniques shows that infrastructure and economic factors are the major factors influencing land use in Lagos. Also, there exist high levels of correlation between these variables, influencing land use of Lagos. The research concludes that significant distortion of the Lagos Metropolitan Master Plan has taken place which led to the unforeseen physical land use structure problems. The paper suggests that there is urgent need for the preparation of new land use development plan for Lagos with special attention to provision of infrastructure and economic policies that will improve the people's quality of life. There is also need to improve the land use administration of the city, harmonization of the roles of various levels of land use management agencies with adequate provisions for citizens and stakeholders participation in the planning process. Electronic planning permit approval system should be introduced. This will improve the time for approval of land use plans and prevent official corruption as the need for physical contacts between prospective developers and planning officials will be eliminated.

## 2 INTRODUCTION

Studies on the problems and prospects of metropolitan areas are usually of great concern to scholars and policy makers. This has been confirmed through the works of many researchers such as in the work of Mabogunje (1968) who examined the distribution and characteristics of residential districts in Lagos. He noted that areas that are districts in social and physical patterns can be found in Lagos. These areas are classified into low, medium and high quality residential areas. Also Ayeni (1979) researched into the spatial interaction and structure of residential areas in Lagos. Sada (1979) attempted a study of land use classification of cities in developing countries. He identified four major physical divisions of cities in developing countries. These are the Government Reservation Area (GRAs), which in most cities generate positive effects, because they are always planned. The second are the private layouts which often generate both positive and negative effects as the quality of life in the area depends upon the monitoring system by the planners. The third is the old traditional residential areas and the fourth the uncontrolled and unplanned fringe residential areas. The last two types he stated are notorious for their negative effects on development due to overcrowding and urban sprawl. Frishman (1979) examined the growth pattern of cities under the Hausa-Fulani, the British rule and the Independent Authority. Specifically on Kano he noted that the growth of the city was determined by the nature of land tenure law in contrast with the European and American cities. Use of land in Kano was mixed in every area and segregation by income and wealth did not occur. Instead, each ethnic group developed her own sub-city, as own sector and expanded outward along its fringe. Okpala (1981) study was on residential mobility in Nigerian cities with Enugu and Onitsha as case studies. The study by Okpala (1981) showed that residential mobility plays a very important role in the smooth functioning of urban housing market. Residential nobility facilitate the phenomena of filtering down process which is very important in improving access to urban housing.

In a study by Okewole (1997), on environmental restructuring in Bodija Estate, Ibadan, increasing environmental restructuring in the planned residential estate, was found to be due to the fact that the designed environment does not satisfy residents aspiration. Adindu and Ogbonna (1998) study was on the nature of urban expansion with Owerri as case study. They concluded that the future growth of the city

depends on the nature of the fringe areas as Owerri city development is circular in nature. Omirin (1998) analysis of residential land accessibility in Lagos showed that there exists an interplay of many factors most prominent among which are low rate of new housing production, increasing competition in the demand for cheap accommodation in the metropolis, drastic fall in the exchange value of the naira vis-avis the currencies of foreign countries from which most building materials are sourced. Other recent research works on Nigeria urban land use include the study by Oyesiku (2002) on the city consultation process paradigm and urban poverty alleviation in which he concluded that the incidence of poverty in the developing countries is on the rise and very remarkable in sub-Sahara Africa, having serious implications for the world and regional economy, growth and physical development. Fawehinmi (2002) researched into property conversion in Nigeria with Akure as case study. He concluded that property conversion is essentially economic to the extent that it is predominantly done for profit maximization. To discourage this phenomenon he suggested that the national economy should improved as this will stimulate commercial property development. Efforts should also be made to increase the supply of formal rental units, as this is the only way to reduce the dominance of the formal property market. A research on the implication for land market transactions, globalization or investment and land market was carried out by Aluko and Amidu (2005) in which they concluded that globalization depends on a well functioning land market, the availability of land, information, secure tenure arrangements and appropriate registration or recording system. Oduwaye (2006) researched on the effects of globalization on Lagos cityscape and concluded that formal commercial land uses are reducing while massive informal commercial land use are now in fragments and predominantly along major roads. Ofofoba (2011) study on land tenure in Nigeria stated that there is much of overlap of functions in the land administration process resulting in confusion of rules. Alade and Oduwaye (2012) identified capacity building on urban land use management as a major constraints to land use efficiency in Nigeria.

In the light of the foregoing, there is no existing work on the implications of land use changes in Lagos, thus this paper essentially investigates of the implications of the present fragmentation and abuse of land use in metropolitan Lagos. It unravels the consequences of this on the quality and optimum utilization of scarce lands in metropolitan Lagos. In a situation where land, the most fundamental resources of all is being developed and exploited without critical and scientific assessment, it is imperative that land use planning and development should become of prime concern of the Lagos community and the government. The pride of place desired by efficient urban land use planning development, administration and development control has been stressed by many urban land use scholars and practitioners. For example, Olajuyin (1997) reiterated the need for efficient town planning practice and professional responsibility in Nigeria. Ibitoye (1997) also presented a similar view in his study on intra-regional planning implications on the provision of physical and social facilities in local government headquarters and their settlements in Ondo State of Nigeria. Makinde (1998), analysis of the state and local government roles within the context of the Lagos State Urban Regional Planning Board and Town Planning Authority, Edict, 1997 concluded that there is need for efficient and smooth inter-government relationship at all levels in order to achieve efficient land use planning and development in Lagos. In line with the view of Makinde (1998); Kadiri (1998) identified the need for good relationships between the state and the local planning authorities as basic prerequisite for successful land use planning in Lagos. The import of these planning experts centered on the fact that land use planning problems in Nigeria cities is more of management and administration of land use. There is need to appreciate the consequences of uncoordinated and unethical practices in the area of land planning, control and development. Specifically this paper discusses the physical development process of different land uses with residential, commercial, industrial, educational and institutional, circulation, parks and gardens. The implications of the present physical development process in Lagos are also discussed with suggestions on how to improve the present nature of physical development.

### 3 THE CASE STUDY AREA AND RESEARCH METHODOLOGY

Lagos Metropolis is located in the south-western part of Nigeria. It is the largest metropolitan area in Nigeria (Ayeni, 1979). Lagos metropolis lies generally on low lands, with about 17500 hectares of built-up area. The approximate population of this area is more than 18 million people. The projected population by the year 2015 by the United Nations is 24.5 million. The projected average population density of the built-up area of Lagos metropolis is about 20,000 people per square kilometer. The significance of the role of Lagos is due partly to her historical and cultural background and partly to her former role as the seat of the Federal government. It also owes its growth and development to European colonial influence.

The data used were from both primary and secondary sources. A total of 755 questionnaires were administered covering all categories of land use types in the study area. Data collected were analyzed through the use of correlation analysis with the aid of Spearman's correlation to establish the relationship between socio-economic characteristics of respondents and land use in the study area. Further analysis on the determinants of residential land values was done with the use of principal component technique. The outcome of the analysis shows that out of the six variables economic, sociological, cultural, environmental, infrastructure and institutional factors, infrastructure and the economy are the major factors influencing land use in Lagos.

#### 4 DETERMINANTS OF URBAN LAND USE

There are many factors influencing urban land use. These factors can broadly be classified into six. They are social, cultural, economic, environmental, infrastructure and institutional factors (Litclifield, 1974). Socio-economic factors influencing urban land use can be viewed from the sociological, geographical, and economic perspectives. To the sociologist, it is the human being, his psychology, which is the key to the process structure and pattern. Other specific social factors influencing land use are quality of neighbourhood, security, prestige, taste, ethnic and social factors. The geographer places emphasis on such things as relief, elevation, climate, location and geology. The economist suggests that it is the economies, which are to be obtained from using a particular piece of land, for example from its accessibility, and centrality that influence land use. The economist also considers the issue of scarcity, demand, nature of use, agglomeration economies, expected revenue, speculation and intervening opportunities. Also cultural factors influencing land use include ethnic origin, religion and tradition. Rapoport (1977) noted that individual aspiration to achieved culturally derived satisfaction, also affect land use.

Environmental factors influencing land use are nature of environment, climate, soil, topography, drainage and quality of water bodies. For example, topography affect amenity ranking though this could vary from family depending on their composition and preference. Topography could have a bearing on land use through its effects on development cost. Also the nature of existing land uses such as seaport, airport, institutions and business areas which generate employment increase demand for land and therefore property value. Critical to urban land use decision is also the level of infrastructural facilities in different parts of the city (Litclifield, 1974). The influences of these factors have been supported by Ayeni (1979), in his study on Lagos during which he attempted a study on the spatial interaction and structure of Lagos. Also in a study by Olaore (1981), during which he established the land value trend in Kaduna, the influence of infrastructural facilities was also confirmed. Basically the following facilities are critical to determination of urban land use, namely, access roads, good drainage, electricity and public water supply. Where these facilities are adequately available, the land values will be high in such areas. Institutional factors affecting urban land use include local customs, traditions, law, organizations and other institutions of human society. Among planning instruments which influence land use are the master plan, zoning regulations, rent laws, land acquisition policies, sources of title and type of tenure.

#### 5 DATA ANALYSIS

The research analyzed the determinants of land use in Lagos with the use of principal components analytical technique (see Table 1). Since the principal components technique produces components in descending order or importance, therefore its adoption in this study is an aid in reducing the variables into fewer numbers which account for as many possible variations among the original variables. The results of the application of these techniques are discussed in the following section.

VAR1	Economic factors as a factor influencing land use
VAR2	Sociological factors as a factor influencing land use
VAR3	Cultural factors as a factor influencing land use
VAR4	Environmental factors as a factor influences land use
VAR5	Infrastructural factors as a factor influencing land use
VAR6	Institutional factors as a factor influencing land use

Table 1: Variables used in Factors Analysis. Source: Field Survey, 2012

Table 2 shows the correlation matrix of the linear association between the variables. The coefficient that is + 0.500 or greater shows a high level of co-variation between the variables involved. Also, coefficient ranging between + 0.400 shows the moderate level of correlation, while those between + 0.100 and + 0.200 indicate a weak level of correlation. Those lower than +0.100 shows little or no linear correlation.

Variables	1	2	3	4	5	6
1	1.00					
2	.709	1.000				
3	.530	.633	1.000			
4	.722	.504	.594	1.000		
5	.693	.512	.601	.582	1.000	
6	.711	.495	.482	.703	.762	1.000

Table 2: Matrix of Correlations. Source: Field Survey 2012

First, it is necessary to state that 95 variables were used for the analysis. For the purpose of this paper the six variables have been isolated as basis of analysis in this study, thus the moderate level of correlation observed in Table 2.

The results obtained in the matrix of correlation in Table 2 shows that all the variables have high degree positive relationships with one another. This is a confirmation of the validity of the determinants of urban land use as established in literature. The score on the relationship between infrastructure and institutional factors shows the highest positive association with a figure of .762. This means that improvement in infrastructural facilities especially roads has been due to pronounced institutional support in the study area. Also the relationship between the following recorded very high degree of positive relationship: economic and sociological factors (.709), economic and cultural factors (.722), economic and institutional factors (-.711). The implications of the above is that improvement in institutional support and infrastructure will be expected to bring about sustainable land use, while improved economic situation will result into effective implementation of planning regulations and land use. Generally the lowest correlation interrelationship figure recorded as .504 is for the relationship between sociological factors and environment. This is still within the range of high coefficient level of co-variation. This means that all the factors identified as basic to influencing land use in Lagos have high level of co-variation relationships.

A further analysis of these variables was done through the application of principal component technique aimed at making each factors independent of each other.

Factors Number	Eigen Value	% of Variance	Cumulative % of Variance
1	4.231	60.471	60.471
2	1.742	17.134	77.605

Table 3: Extraction of Initial Factors (Components)

Table 3 shows the result of the extraction when the six variables (determinants of the land use) were subjected to principal component analysis. The six factors have been reduced to two which give accounts of all the other factors. The first components are renamed infrastructural facilities and the second component renamed economic factors. It can be observed in Table 3 that the first factor has an Eigen 4.231 which is the relative magnitude of variance accounted for by the first variable. Usually the first Eigen value accounts for the highest variance in the data set. The first components also explain 60.471 percent of the variance in the data, while the first two components account for 77.605 percent of the variance in the data. As discussed earlier that the aim of the principal components is that of data reduction, thus not all the components or factors influencing land use in the study area are retained in the final rotation solution. The first two components which account for 77.605 % of the variance is retained. This is based on the criterion that the two factors components have at least 5 % of the total variation based on Spence's specification (Spence, 1968).

Variable	Factors		
	1	2	
VAR5	Infrastructure Facilities	.871	.263
VAR1	Economic Factors	.862	.157
Eigen Values		4.286	1.264
% of Total Variance		60.141	17.314
Cumulative % of Total Variance		60.141	77.455

Table 4 revealed the component loading for each primary variable of each of the components when they are subject to varimax rotation. Note: Loading that is equal or greater than 0.40 are considered to be high.

The interpretation of the loading is the same as it was done is the correlation coefficients. Factors loading of 0.401 and more are considered to be high. This is also in agreement with Spence (1968) who considered 0.40 as a cut off level for high factor loading. Based on this, the first factor which accounts for 60.141 of the total variance loads highly on both infrastructural facilities and economic factors, whereas the second factors which accounts for 17.314 % of the total variance loads relatively low on both infrastructural facilities and economic factors with figures .263 and .157 respectively. The implication of these figures is that

infrastructural facility improvement and economic factors are highly related in factor 1, while they are weakly related in factor 2. The implication of this is that where there is improvement in infrastructural facilities there is expected to be improvement in economic variables, usually this will manifest in form of increase in revenue on landed properties.

## **6 LAND USE DEVELOPMENT PROCESS IN LAGOS METROPOLIS**

The land use and settlement pattern of Lagos in the last twenty-five years can be highlighted through the review of different land use categories namely: residential, industrial, commercial, industrial, educational and institutional, religious, circulation, parks and recreational areas.

### **6.1 Residential Land Use**

The noticeable major determinant of residential development in Lagos is that of accessibility infrastructure (road) and land value. This is in agreement with what has been identified in literature and these are among the variables identified and analysed through the principal component technique. The land value could be in terms of rent, cost of purchase of apartment/house and cost of residential land plot. Motorway corridors are major determinants of urban residential growth. The Lagos-Badagry, Lagos-Abeokuta and Lagos-Epe expressways attract indiscriminate physical development in all directions. The nature of the indiscriminate development is further compounded due to the mass land acquisition by both the state and federal government, which in most cases are not followed up with appropriate schemes through which the people can easily purchase land and develop in compliance with such schemes. Thus, illegal land development, predominantly of residential use continue to spring up in response to ever-rapid population growth especially in the fringe areas of the metropolis. The phenomenon is common in the urban fringe of Isheri in the north; Ikorodu and Ajegunle in the north east; Ojo-Badagry Axis in the south-west; Alagbado, Ipaja in the north-west and Lekki region in the south-east. However it does not mean that all residential buildings springing up in these areas are not approved by relevant government planning agencies of either the local, state or federal government. The case is that most of these structures are not in approved layouts. Some of them are also on acquired government lands.

Land which residential building can be built without contravening exist planning regulations are scarce or are not in accessible locations therefore, the policy of government towards residential land development should be re-examine to take care of these noticeable deficiencies. Another type of residential units and support facility phenomenon is the filling-in of existing un-used spaces especially in older inner city areas. For example the second Republic civilian government (1979-83) regime in an effort to achieve the policy of Universal Primary Education (UPE) was confronted with acute shortage of classrooms. The government embarked on quick response through construction of classrooms on available urban open spaces. These spaces were areas earmarked and use as public open spaces and recreational areas in many residential neighbourhoods. Thus urban open spaces have virtually been eliminated from the Lagos landscape.

### **6.2 Commercial Land Use**

Lagos is not only the leading commercial nerve center of Nigeria but also that of West Africa. Lagos metropolis, has the potential of becoming the leading Africa center of trade. Many areas specifically earmarked in the metropolitan Lagos master plan for commercial development have not been developed. This has been due to the low level of economic activities in the country generally. Hence, the demand for high quality commercial premises, which could have emerged from such schemes, could rather be low. Therefore these have led to a situation where illegal conversions of buildings especially those along major roads and streets have generally been embraced by property owners. This is common in residential areas especially in traditional core areas and high-density residential areas. Lagos is presently characterized by commercial ribbon street development such that virtually all high-density areas are in a chaotic state with indiscriminate mix of commercial, light industry, transport and religious land uses. The phenomenon of chaotic land use mix deserves special attention in any future regional and master plan scheme of Lagos. Also, existing commercial places especially markets mainly under local government administration in the city are being expanded without due compliance with appropriate planning regulations such as car park requirement, set-backs among others.

### **6.3 Industrial Land Use**

Except for the new Ikorodu Estate and Lekki Free Trade Zone there is no new industrial estate development in the last two decades. Again, the reason for this is not farfetched. It has been mainly due to the economic downturn of the country and government's lukewarm attitude. Existing industrial premises are characterized by sealed up factories, factories being converted to mere warehouses and to religious worship centers especially churches. The reasons for this is that the operation of most of the existing factories require very huge amount and the import liberalization policy of government in compliance with globalization principle has made local production unprofitable, thus manufacturers prefer importation of finished goods. The few operating factories are not operating at full capacity of their installations. The implication of this is that there has not been remarkable industrial land expansion in the city. This will require special attention, as industrial operation is the engine of growth and development because of their multiplier effects on income, savings and development of other land uses. However, the Lekki Free Trade Zone implementation construction commenced recently. Judging by the political will and commitment by the Lagos State Government there is prospect for the physical manifestation of the idea.

### **6.4 Educational and Institutional Land Use**

As earlier mentioned in the section under residential land use development, the state government encouraged the development of physical structures to provide more classrooms mainly at the primary and secondary school levels. Also the liberalization of education at all levels in which the private sector is allow to establish and manage educational institutions has increased substantially the land area occupied by educational uses. However, land space for most of the private sector educational institutions are through the conversion of existing buildings especially residential to educational uses. Few buildings are approved and constructed for educational use. Most of the new buildings specifically approved for educational uses are on plots earmarked for residential apartments thus compromising appropriateness and efficiency of location of educational facilities. Any meaningful future plan of the city should detail the pattern of their locations and enforce planning standard requirements of existing educational facilities at all levels. This problem is more pronounced with nursery/primary, vocational and secondary schools.

Institutional land uses also witnessed significant landmark effects in two areas the construction of the new Lagos State Secretariat at Alausa and the movement of the nation's capital to Abuja. Therefore, the spillover effects of the state secretariat on other land uses has been remarkable. Ikeja, the location of the State Government Secretariat has witnessed tremendous growth of commercial and institutional uses while traffic congestion has become a major problem. In the case of the seat of the Federal Secretariat at Ikoyi, the area has witnessed significant drop in traffic due to the movement of the seat of Federal Government to Abuja. The establishment of the Lagos State University in Ojo has its impact on trip generation and distribution, around the Ojo origin. Aside from these three major landmarks of institutional changes, Lagos has no other significant institutional land use changes.

### **6.5 Religious Land Use**

Historically, this has always been part of residential facilities in the land use structure of Lagos except for few religious locations within commercial districts such as in Lagos Island and Ikeja. The major and significant phenomenon recorded in this land use class has been tremendous development of religious places in every nook and corner of the city especially in built-up residential areas. Churches and mosques are the most prominent features. An average of about ten places of worship of various sizes can be observed per square kilometer of any built-up residential area except in government and private estates. The number is higher in high-density residential areas. This is a major problem especially when consideration is given to the mode of worship with loud speakers, which are installed outside the buildings, thus generating high level of noise during services. Other problems arising from these unapproved places of worship include vehicular congestion and heavy human traffic problems of which car parking is a major aspect.

### **6.6 Circulation**

By the turn of the 19th century bridges constructed mostly of timber had been completed to link Lagos Island with Iddo known as Carter Bridge and Denton Bridge, both are no longer in existence. Both bridges have been replaced by new dual carriage ways with concrete median separators. The Lagos railway started under the management of the Nigeria Railway Corporation in 1896, with its terminus at Iddo. The rail lines run in a

north-south direction and still maintains the steel track of the pre-colonial type. It still maintains the steel gauge tracks of the pre-colonial type. Road network development started in the second half of the 19th century with the initial opening up of the Marina. The administration of governor Glover opened up the Broad Street in Lagos. He also linked up then Victoria Street (now Nnamdi Azikwe Street) with the mainland in 1866. By 1900 the city had about 15 kilometers of road over which horse drawn carriage were pulled. By 1946 two main arterial roads of greater Lagos had become prominent links with the hinterlands. They are the Ikorodu Road and Agege Motor Road both of which run in north-south direction with the Agege Motor Road running parallel with the railway line.

Road network in Lagos can be classified into three broad types namely the expressways, major arterial roads and other roads which serve as access and collector roads. Existing express roads are Ikorodu Road, Fusho Williams Avenue-Agege Motor Road-Abeokuta Express Road and Apapa-Oshodi-Oworoshoki Express Road. The complex network of bridges on the Lagos lagoon connect various parts of the island to the mainland with the most important line being Eko Bridge which links the commercial core of the Idumota on the island to Oyingbo in the mainland with a length of about 11/2 kilometer. The Third Mainland Bridge completed in 1991, is about 10 kilometer long. It is reputed to be the longest bridges in Africa. It links the Oworoshoki end of the mainland to various parts of the island of Ikoyi, Victoria and Lagos Islands. The Third Mainland Bridge is the busiest of all the bridges with a peak periods of between 7-10a.m and 4-30p.m, respectively during the working days on Monday to Friday. It has increased tremendously accessibility and economic activities in Lagos. The Lagos-Ibadan Expressway is in the northern boundary of the metropolis. It serves as the major link of vehicular traffic out of Lagos to other parts of Nigeria. The Lagos-Epe Express and the Lagos-Badagry Express Way located and runs towards the east in the south/east and the latter towards the west in the south-west are also major traffic routes. The recent commencement of the construction of light rail running parallel to the Lagos-Badagry expressway will enhance development along this region. Two airports serve Lagos, Murtala Muhammed Local and International Airports with both of them located at Ikeja, the capital of Lagos State. Also two major seaports serve Lagos. They are the Apapa Wharf and the Tin Can Island Port. They are both linked with the Apapa-Oshodi Expressway.

### **6.7 Lagos Parks and Recreational Land Use**

Prior to the development earlier mentioned regarding educational institutions, the construction of schools on open spaces were common in the late 1970's. Ample parks and open spaces existed in Lagos despite the fine texture of the urban morphology. During the colonial periods more attention was devoted to the development of Ikoyi as a garden suburban coupled with the development of private commercial and club recreational grounds such as the Race Course now Tafawa Balewa Square, the King George IV Stadium now Onikan Stadium, the Ikoyi Golf Course and the Government House Garden, the National Stadium and the recently completed Thunder Balogun Stadium at Surulere. The earlier forms of European gardens which later influenced greatly the present landscape style of Lagos existed before colonization. They were the gardens and plantations developed around the traditional forts built by the European Merchants. They were mainly utilitarian gardens devoted to the cultivation of exotic food crops and fruit trees. Few of them had summer houses. During this time the forces and taste influential to the development of Renaissance gardens in Europe were already at work. Some of these early gardens had traits of the garden styles peculiar to the countries of the European merchants who built them.

The colonial landscape of Lagos will not be complete without the mentioning of the government reservation area (GRA). The principle of the GRA development can best be illustrated by the description given to its by Lord Lugard in 1904. According to him the European Reservation Areas now known as GRA should be developed as a cool fruit and flower garden where one could sit on a shady verandah in the privacy of one's own home. Extensive public open spaces with recreational grounds and sports field would be near both office and home, reached by shady pathways. The GRA's were the European government version of the garden city in Nigeria. The products of these are houses to be seen in the older GRA's such as in Ikeja. They were built in the then remote areas but have been surrounded by built-up neighbourhoods due to urban sprawl.

After independence in 1960, new landscape features continued to reflect the British styles. Many landmarks to commemorate the independence anniversary were built in form of statues and gardens. The early post-colonial landscape features include the Tinubu Square fountain, the remembrance arcade and the Tafawa

Balewa Square. The Ibrahim Babangida Boulevard Obelisk was built in 1991. Unfortunately, modern Nigerian landscape movement started in Lagos, today it has very little to show for it in the area of public gardens and parks. Existing parks and open spaces can be found along Lagos Marina which has been blighted by the construction of hard concrete fly-overs. The beaches of Bar Beach, Lekki, Badagry are areas that should be improved. A few recreational grounds and local parks have been developed in recent times by private clubs, social and non-governmental organizations and many private residential estate developers. These renewed efforts should be sustainable through government facilitation effort. Recently government embarked on city-wide massive landscaping and this has significant impact on the greenery of Lagos. Many new parks are constructed, among which are Gani Fawehinmi and Moshood Abiola Garden.

The “Nigerian Urban Planning Decree No. 88, 1992” is a rescue mission legal framework which should substantially improve the quality of the environment in all parts of Nigeria including Lagos. The establishment of the Lagos State Urban Regional Planning Board and the various Local Planning Authorities will no doubts lead to sound land use planning in all parts of Lagos. The prospects of good landscape rest solely on the local planning boards. Local Planning Authorities should exercise the enforcement power provided in the law establishing them in order to achieve remarkable level of land use compliance by the public. Reduction of taxes and levies by government for environmental friendly organizations could be used as incentives to encourage environmental improvement.

## 7 DISCUSSION ON LAND USE CHANGES IN LAGOS

Land use changes have been gradual over twenty-five years and sporadic in the past ten years across the entire Lagos Metropolis. However, the genesis of the dynamic land use structure has a humble beginning as at 1910. The society was simply not properly monitored because there was no formal planning authority in place. Thus spatial coverage of Lagos was limited around the present day Lagos Island Local Government Area.

The land use structure has changed from the former simple pattern to a complex pattern. This was as a result of intense and widespread urbanization. Though, as at this period planning and development activities were guided adequately by the Lagos Executive Development Board that later transformed to Lagos State Development and Property Corporation. Socio-economic characteristics played major roles in the ordering of the land uses. The result of this was segregation of human settlements based on socio-economic status. The spatial extent of Lagos Metropolis has greatly increased, likewise intensity of land use. The land use pattern that ensued in 1970 revealed a linear settlement pattern using the major roads and the railway line as points of origin. Again, the land use structure had a central business district in Lagos Island and the intensity of use has also improved. In the 1980s land use structure for a potential metropolis has ensued. The land use structure before the preparation of Lagos State Regional Master Plan and subsequently Metropolitan Lagos master plan was beginning to generate attention because there were widespread urban problems as a result of uncoordinated urban development and inadequate development control. The roads network was extended and improved upon to cater for the prevailing urban problems. The districts were characterized by diverse socio-economic conditions (such as income, population density, building conditions, poverty level, development potentials, economic base and predominant land use). A multi-nuclei urban center was in its embryonic stage. The spatial coverage was largely influenced by population size and development needs. Lagos Metropolis witnessed one of the highest levels of urbanization between the periods of 1980 to the present time. This is due to globalization trend in economic activities fuelled by advancements in science and technology in the area of information technology, the global economy, telecommunication, resources utilization and management.

Specifically, the most noticeable effect of globalization within Lagos cityscape is radical shift in the land use pattern. The high dependency of the city economy on imported goods, has led to a massive depletion, within a decade, of industrial enterprises with its attendant erosion of job opportunities. While industrial land uses are decreasing however, alternative uses, chief among which are religious in nature, are rapidly taking the place of industries, churches especially are in the forefront. It is thus a common phenomenon to see churches occupying entirely an area hitherto used as factory or partially occupying a significant portion of such premises. Such religious places have their peculiar complementary accompaniments such as weekly heavy traffic. Many commercial premises in different parts of the city have also given way to religious land uses. The reason for this is that churches seems in the prevailing circumstances, to be the land use capable of

affording the rents demanded by property owners, the service sector having been economically weakened as it were, by forces of globalization. These phenomena can be described as change of use of existing buildings. Change of use of existing land use zoning plan is common feature. The city is now dotted with uncomplimentary land uses in many areas. This is common with uses such as multistory office blocks within residential neighbourhoods. This is contrary to basic urban land use theories, which discourage intrusion into privacy of residential areas. This aside from being an intrusion into household's privacy is also a security risk. The heavy traffic which accompanies such invasion also violates residential neighbourhoods. Aside from multistories within residential areas, petrol filling stations and fast food outlets are other common features observable within the Lagos cityscape. Surprisingly however, most of these anomalous land uses have the approval from appropriate government planning agencies. In a sense, physical planning contradictions in the city are exigent response to the negative impact of globalization on Lagos economy. With industries being frustrated out of business and jobs drying up, government revenue through company tax and personal income tax is correspondingly dwindling. In search of new sources of revenue, government, it may be argued, is forced into unorthodoxies in revenue generation. Since these new uses are capable of paying the necessary levies, taxes and other financial returns to government naturally, they are supported by government. It is however mandatory for these new uses to apply for change of land use, process the new building plan, pay specific fee for the changes as well as pay company and personnel taxes. Thus the changed landscape is the result of economic needs on the part of government and individuals. Again as identified in literature and confirmed in the analyses economic factors and institutional variables have significant influences on the Lagos land use structure. The influence of infrastructure is more pronounced, especially with its negative effects on industrial land use.

With the decline in the formal sector of industrial and formal service industries, the informal sector has emerged as the dominant feature of the cityscape. Usually in the form of scattered small-scale service points. The bulk of the informal sector usually operates along major roads and within neighbourhoods. This sector has also assumed the services formally provided by supermarkets, furniture sales shops, electronic stores, hardware shops etc. Following the demise of the formal sector, which these units of business were a part, it is important to reiterate here that the collapse of these formal service units is due to globalization, which has eroded local industries, which used to produce the goods sold at these shops but which can no longer do so because of their non-competitiveness within a globalize economy. Since the informal sector can afford to offer similar services at lower prices made possible by relative lower overheads, of the doubtful quality of the goods, they become the only available avenues for consumer, even at high risk. The Lagos streetscape is dotted with small scale sale shops offering a wide range of services from household items, electronics, furniture, hardware, and cobbling, packaging and sundry cottage manufacturing industries. In the market sector hawking, itinerant salesmanship and home trading thrive while in the service sector catering, telephony service, hair-care, vulcanizing, motor mechanic etc dominate. The city landscape is in fragments of dirty production and service points with no regard for land use zoning. As with changes in land uses, the informal sector is now a major source of revenue for government at the local level. Informal enterprises are closely monitored to pay sales tax by local government authorities. It can be concluded therefore that the informal sector is currently a major provider of employment in Lagos.

All these have profound impact on the land use structure that ensued. Presently, a multi-nuclei urban pattern has emerged with its spatial coverage extending greatly into the hinterlands. The recent land use trend produces lateral expansion into neighbourhoods sub-urban centers (Mowe, Ikorodu, Sango-Ota, Okokomaiko, Ajah etc). The possibility of a conurbation is being studied with regards to other urban center such as Sagamu, Abeokuta, Ifo among others within the next ten years. The land use structure has grown to a very complex nature with associated dynamic urban problems.

## **8 PLANNING IMPLICATIONS OF FINDINGS AND SUGGESTIONS**

The only major comprehensive master plan of Lagos was prepared in 1985 but unfortunately the detailed district plans were never prepared. The master plan was reviewed two years ago but attempts to prepare a new one has not been initiated. The uncontrolled urban sprawl prior to the preparation of the master plan continued. Rapid development continues to feature prominently especially at the northern part where land is firm and not as water-lodged as it is in the southern end where this led to high cost of physical development. The Lagos-Badagry, Lagos-Ibadan and Lekki-Epe expressways continue to attract physical development

indiscriminately in all directions. The nature of expansion is further complicated by government mass land acquisition policy which is not followed up with appropriate schemes through which the people can purchase land and develop in compliance with legal requirements. Therefore illegal structures continue to spring as the increase populations have to respond to natural need for shelter.

Previous government policies do not improve the situation as illegal building owners are made to pay penal fees which they are always ready to pay. Therefore unplanned neighbourhoods continue to emerge. Tremendous invasion of the suburb in many-regions such as Lekki in the south-eastern part continued. Towards the north-west, the situation in Ikotun, Ipaja, Agege, Abule-Egba, Ojokoro are worse mainly with residential buildings. Towards the north-east the nature of the riverine serves as a check against indiscriminate construction. Nonetheless pronounced illegal building constructions are common. All these do not necessarily mean that buildings are not approved by the planning authorities. Land on which people can build without contravening existing regulations are scarce, therefore the policy of government towards land development deserve immediate overhaul, if the people are to build houses without contravening planning legislations. The second types of development are the filling-in of the existing un-used spaces within the urban fabric. Abuse has been from both government and the people. For example the second republic civilian regime in an effort to achieve the policy of Universal Primary Education (UPE) was confronted with acute shortage of classrooms. It embarked on quick response through construction of classrooms on available urban open spaces earmarked as public recreational spaces in old neighbourhoods layouts. The state civilian government has filled in such spaces with classrooms blocks in virtually all parts of the metropolis. Thus, virtually all open spaces in the urban fabric disappeared leaving no meaningful community recreational open spaces in Lagos Metropolis. Today Lagos appears practically full of hard landscape in the built-up areas without any appreciable neighbourhood open spaces, neither parks nor gardens. This has serious consequences on the recreational life of the inhabitants.

Most of the negative observations such as conversion of open spaces to other uses, non-implementation of plans, abuse of planning standards can only be overcome through the preparation of either a new master plan or preparation of schemes at local or subject plan levels even though piece meal district plans are currently embarked upon by the government. This will require sustainable strong political will and building of appropriate human capacity, modernization of development approval and monitoring system. There is also need for effective public participation. The complexities surrounding the mechanism sustaining Lagos physical development have become more difficult to understand.

## 9 CONCLUSION

From the discussion above it is clear that appreciable physical development have taken place in Lagos from the pre-colonial period to the present time. A critical study of the land use shows that they have largely been influenced by western styles. The indigenous planners are yet to come-up with distinct style rooted in our traditional land use planning. However we can appreciate the complexity of the problem through the historical background of modern education in Nigeria which was based practically on British background. Also other problems that should be resolved in order to overcome the present constraints include adequate finance, social factors, manpower, cultural factors, geomorphic and legal problems. Majority of the people are poor therefore emphasis should be on functional physical development such as prevention of flooding, housing, environmental sanitation, parks and gardens, paved pedestrian walkways, tree planting amongst others.

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