

## **Impact of Urban Land Use Changes on Property Values in Metropolitan Lagos**

M.A. Adebayo

Department of Estate Mgt., Federal University of Technology Akure, Nigeria

**Abstract:** Change in any form and in any society is inevitable; it has become part of an urban growth. For economic reasons, land and buildings will continue to change in use from a lower order to a higher order status in order to attain optimal use. Such changes usually result into land being allocated to its highest and best use culminating in higher economic returns. This study takes a close look at the impact of land use changes on property values in metropolitan Lagos with a particular reference to Victoria Island. One hundred questionnaires were administered to randomly selected estate surveyors, estate agents and managing agents practising on the island. The data obtained are analysed with the use of simple descriptive statistics, particularly frequencies, percentages and ratios. Findings show that there have been remarkable changes in land use pattern from residential to commercial and this had led to corresponding changes in property values in the area. Moreover, the changes in use have also created problems such as traffic congestion, over stretching of infrastructural facilities and noise pollution. There is therefore, the need for adequate land use planning to take care of the changes brought about by increased commercial activities. In addition, there is a need for town planning authorities to monitor the process of changes to prevent negative effect on the environment.

**Key words:** Impact, property values, metropolitan langos

### **INTRODUCTION**

The term 'land' suggests different things to different people depending upon their outlook and their interest in the land (Barlowe, 1978). It is the sum total of the natural and man-made resources over which the possession of the earth surface gives control. It is the platform of all human activities-economic, social, spiritual or recreation etc. The entire land area of a country can be broadly divided into urban and rural lands. Within an urban area, a rational pattern of land uses evolves as an urban area consists of a great variety of interdependent activities and the choice of location of any activity is normally decided by assessing the relative advantages of various locations for the performance of such activity. Therefore, in the long run, activities tend to locate in areas that give the greatest relative advantage. Thus, by a process of competition, activities seek out and segregate themselves in that area in which their optimum conditions (greatest relative advantage) are to be found and by virtue of which they are normally able to exclude other uses. The spatial differentiation of urban land use pattern becomes more marked and complex as population and degree of specialization increase.

The economic factors of demand and supply of urban land also play a significant role in this process of land use pattern. Lean and Goodall (1966) attest that the pattern of land use in any urban area is a replication of competition

for sites between various uses operating through the process of demand and supply. Similar patterns of land use emerge in different urban areas because of competition between different potential users for given sites. The person who is willing to pay the largest sum for a site is likely to be the person who will eventually occupy and use it. He will be able to compete it away from other potential users. By this mechanism, sites in an urban area will tend to be used for that purpose from which the user makes the greatest net gain from alternative uses of that site. This would result in the highest and best use for that land.

The scenario above becomes a continuous process of one user giving way to a higher valued user where the optimum realizable could be attained. This is the exact situation that has been observed in Victoria Island, Lagos.

This study therefore, seeks to analyse the impact of urban land use change on property values in Victoria Island of Lagos metropolis. A nation's land resource is a very important component of her national wealth and its optimum use would help to improve the economic health of the nation. Thus, by investigating how a change in the use of land affects its value, it may be possible to identify existing use abuses and thereby proffer solutions that guarantee optimum use of available land resources.

**Urban land use:** Urban land use is the physical manifestation of socio-economic, cultural, political and

environmental forces shaping the use of land in urban areas (Akinmoladun and Oduwaye, 2004). The spatial pattern and nature of proportion of land uses in urban area is largely influenced by the national policies and economy such as housing policy, transportation, agricultural policy, industrial policy and development of communication technologies. The proportion of the productive population and growing discretionary incomes act as economic magnet attracting new activities that eventually reshape urban growth and development. Generally, urban land is used for various purposes but the most common types of uses include residential, commercial, industrial, recreational, transportation, public and semi-public uses. In most cities however, residential use always covers between 50-60% (Herbert and Thomas, 1982) comprising houses of various kinds ranging from detached houses, duplexes, condominiums, block of flats and bungalows to tenement houses of single rooms. The proportions of the area coverage by different land uses are influenced by many factors, which include socio-economic, physical and environmental, technical infrastructure, government policies and laws. In metropolitan Lagos, some areas are exclusively planned for residential uses; these Areas include Victoria Island, Ikoyi, Surulere, Government Residential area of Ikeja, Apapa, Ogudu and the low cost housing estates of Amuwo-Odofin, Ipaja, Isolo, Iba, Iponri, Ogba and Ojokoro. Commercial uses include areas used for activities such as market places, shops, shopping complexes, offices and exhibition centres. As some of these specific uses are planned for in some urban areas, some grow out of the spontaneous needs of the community in a residential area. The provision of access roads-both pedestrian and vehicular usually lead to the upspring of blocks of offices and shopping complexes along the access routes. This phenomenon is very much noticeable all over metropolitan Lagos.

Industrial land use provides for existing and future manufacturing establishments as well as other related uses such as warehouses. Industrial areas of metropolitan Lagos include Ikeja, Ogba, Ilupeju, Oshodi, Oregun and Apapa industrial estates.

Transportation land use provides avenue for movement from one place to the other. This comprises highways, expressways, primary and secondary roads, feeder roads, sea and airports. In an urban area, this use usually takes between 17-22% of the total land area. (Herbert and Thomas, 1982).

Institutional land uses include areas prepared for the major institutions of government at all levels (federal, state and local). These include schools, hospitals, police, post office, cemeteries, places of worship and barracks. Table 1 shows the land use analysis of Lagos.

Table 1: Land use analysis of metropolitan lagos

Land use	Area (Hectares)	Coverage (%)
Residential	9.669	52.1
Commercial	1.021	5.5
Industrial	1.448	7.8
Institutional/Special use	2.784	14.0
Open space	520.000	2.6
Transportation	3.340	18.0
Total	18.782	100.0

Metropolitan lagos master plan, 1985

**Urban land use change:** Land use change is a complex phenomenon differing greatly from place to place. According to Hill (1989), causes of change include personal choice, legislation, government policies and plans, decision of developers or transportation entrepreneurs, the nature of the land itself or the availability of technology to develop the land. Urban growth will also alter the pattern of land use and land values within an urban area as well as the intensity of site use. Growth brings more activities and persons into the urban area in search of sites, so concentrating more workers, machines and buildings in that area. This necessarily requires some readjustments to existing uses of land and those lower order uses find that they become sub-marginal occupiers of near central sites and, in time, will relocate to sites more distant from the position of greatest accessibility where they will also be joined by new lower order uses attracted to that town. Urban growth thus involves the twin processes of internal reorganization and outwards expansion.

The increased demand for sites arising from urban growth will make it profitable to demolish existing buildings and redevelop in a new, higher order use. Redevelopment occurs in or near the position of greatest accessibility and takes the form of replacing lower structures by higher ones. Where a site is developed, this may bring about a change in use, say from residential to offices, or it may represent rebuilding in the same use but to a more intensive level. Such redevelopment necessitates considerable changes in the physical framework of an urban area and comes about after the pressure of demand has been increasing for long period of time.

However, changes in use can and do take place without having to demolish existing buildings. Thus, residences near the central business district may be taken over by office users without any form of renovation. This phenomenon is very common in many urban areas of Nigeria most especially along routes of great accessibility. Fawehinmi (2002) quoting reported that 73.5 and 77.5% of households in Ibadan and Lagos, respectively had witnessed one form of conversion or the other in the buildings they occupied with the majority of the

conversion being from residential to commercial uses. Majority of the conversions are along the major roads in those cities.

**Property values:** In this context, property value refers to the market value or market price of a particular interest in landed property: The amount of money which can be obtained for the interest at a particular time from persons able and willing to purchase it. In other words, it means the worth of an interest in land and buildings assessed by the use of appropriate valuation methods (Kuye, 2000). The 2 types of values considered in this study are the capital value and the rental value. While the former refers to the total lump sum realizable from the sale of an interest in the property, the latter is the annual income being collected on the let out property. Various factors affect these property values; a few of such factors are examined.

**Location:** The factor of location is very important in the determination of property values. Location is very unique as two adjacent sites may command different values depending on underlying factors of accessibility, physical terrain, size and configuration etc.

**Accessibility:** Accessibility evaluates the net economic cost of moving persons and goods between one place and another. It therefore, concerns both the distance travelled and the time taken to cover that distance. The availability of land for development can be enhanced by adequate transport network. With a given transport system, movement would be concentrated along particular areas, thus bringing about difference in site values as a result of accessibility advantages. Sites close to a main transport route will have a relative advantage. Sites located at route intersections will possess an even greater relative advantages, while the greatest relative advantages belongs to those sites located at the focus of the urban transport system i.e., the central business district. According to Millington (1994), proximity to good means of transportation/communication is a great advantage with virtually all property.

**Infrastructures:** These are physical structures and facilities that are developed or acquired by public agencies to enhance governmental functions and facilitate the achievement of common social and economic objectives. The availability of infrastructure attracts potential users to an environment. The availability of electricity to power machines, household facilities, roads for easy accessibility, communication gadgets to facilitate

contacts, drainages and refuse disposal that enhance the livability of the environment etc lead to rise in property values in such environment. Demand for land and buildings in such area will be high and since supply is relatively fixed, value will rise.

**Complementarity:** Complementarity of persons and activities is said to be one of the advantages of locating in an urban area. If a particular site is surrounded by offices or houses or any other particular use, this would determine what will be the highest and best use of that site. Complementarity brings about the clustering of like uses such as when one firm requires the by products of another as a factor input or requires the specialist service of other activities. Firms will be willing to locate in places where other beneficial firms congregate and thus provide one another the advantages of complementarity. The high demand of such site increases property values.

**Land use change and property values:** Urban areas are continually subject to changes in use pattern and therefore, in value. As social and economic factors making for such changes exert their influence, land uses within an urban area will change with the resultant effect on property (land and buildings) values (Lean and Goodall, 1966). Basically the pattern of land use is a reflection of competition for sites between various uses operating through the forces of demand and supply. In an attempt to compete for space at the choice location (the city-centre) some uses are displaced for other potential uses willing to pay higher prices. In the same vein, owners of property at the choice location will be willing to convert the use of their property to those ones that offer the greatest advantages of rents and better management. In modern society, land resources usually earns a higher return or income/net gain when used for commercial or industrial purposes rather than for any other types of use. As a result, these uses are often able to outbid other uses for almost any site in an urban area. Since, the land in such urban areas are limited in supply, the use of such land is intensified for commercial purposes that command the highest value. This situation is such that exists in Victoria Island of metropolitan Lagos, the database for this research.

**The study area:** Victoria Island is one of the central business districts of Lagos metropolis. It is located within Eti Osa Local Government Area of Lagos State. The local government is located at the coastal end of the state covering an area of about 1,200 ha. Victoria Island is about 8 square kilometers in area and has a flat terrain that

hardly rises above 30 above sea level. Hence, most of the area usually experience annual flooding from the overflow of the sea waters. Victoria Island is bounded in the north by '5 cowries creek', to the east is Lekki Peninsula, to the south is the bar beach and to the west by Lagos Lagoon. Victoria Island houses the rich, political movers and foreign embassies and has in recent time becomes the nerve centre of the nation's financial sector. The Island possesses adequate infrastructural facilities when compared to other parts of the State. Properties in this area attract high and powerful competitors and due to its prestigious location, they command high rental and capital values.

## **MATERIALS AND METHODS**

Land use changes as common in urban areas are very much noticeable along the major roads in Lagos. Apart from along the routes, there is no other areas of the metropolis where such changes occur at a very significant level except Victoria Island. The area is therefore, chosen as a focus of this study because of the high level of changes there in the past 20 years. A questionnaire was drawn and randomly distributed among practicing estate surveyors and valuers on Victoria Island, other estate agents and managing agents of many of the properties on the Island. In all, 100 questionnaires were administered, of which 90 were retrieved. The 90% response achieved is usually rare but the success is attributed to the caliber of the target sample and 'esprit de corps' enjoyed from fellow estate surveyors and valuers. The retrieved questionnaires were then analysed using simple descriptive statistics particularly, frequencies, percentages and ratios. Moreover, a physical inspection of the Island was undertaken to obtain first hand information on various uses on the Island.

## **RESULTS AND DISCUSSION**

**Existing land use in victoria island:** Victoria Island was until recently a predominantly residential area with pockets of commercial and institutional uses. The continuous infiltration of commercial use over the past twenty years have turned the Island into an area of mixed use of commercial/residential. Today the neighbourhood is characterized by first class development of high-rise buildings towering the landscape.

**Residential properties:** Residential properties abound all over the Island but most of them are already converted into commercial uses. Most streets, closes and avenues

are opening up to commercial activities and trade. Purpose-built residential buildings here include high-rise luxury flats, block of flats, maisonnetes, duplexes, semi detached, detached and bungalows.

**Commercial properties:** Some houses are purposely built for commercial use while some are converted from residential to banking halls, offices and supermarkets. The predominant commercial uses include:

**Office buildings:** These are purpose-built office building of high-rise and residential block of flats of over 3 floors. Occupation of such buildings and rent payment is based on office-spacing i.e., per square metre measurement to determine the rental value. Services provided in such buildings include general cleaning/gardening, security, elevators, power generating sets and water supply.

**Supermarket buildings:** The trend towards large supermarkets with free parking lot has caused many parcels of isolated lands in Victoria Island (V.I.) to be developed. These stores and eateries seek locations with adjoining vacant land for parking by their customers.

**Banking halls:** These are found and heavily concentrated on the major streets and roads. Their locations are surrounded by heavy commercial activities, one of the reasons for high rental values in the area. The banks occupy bungalows and ground lower floors of high-rise office buildings.

**Institutional properties:** Properties under this category include educational land and building-primary, secondary and tertiary institutions. Others are police stations, barracks, military camp and settlements, Air force base and Navy quarters. Other Uses: Other land uses on Victoria Island include hotels, recreational parks, beaches, tourist venues, petrol filling/service stations and open market places.

**Factors determining land use in victoria island:** The Table 2 shows the variables that determine Land Use in Victoria Island

The Table 2 shows that demand and supply factors with the highest score of 65.55% are mostly responsible for the land use pattern in Victoria Island. The factor of accessibility is also considered by some respondents (8.88%). These are probably those who reside in or around the area. It was discovered that many used part of their residences as offices.

**Effectiveness of town planning regulations:** With regards to the activities of law governing land use in Victoria Island 40% of the respondents believe that the laws are ineffective considering the sporadic changes that take place within this decade.

**Major changes in pattern of land use:** It was 100% agreed that there have been drastic changes in land use in the last ten years. However, Table 3 shows the types of changes that took place.

From the Table 3, various changes have occurred but the major change is residential to commercial use. 78.88% of the respondents attested to this. The respondents also believe that there are no conversions from commercial to residential.

**Effect of changes on property values:** The effect of the land use changes on the property values on the Island can be appreciated from Table 4 and 5. The Table 4 and 5 show the rental and capital values of both residential and commercial properties between 1996 and 2004.

From Table 4, the rental value of a 3 bedroom flat ranges between ₦500,000 and ₦650,000 in 1996. By 2004, a period of about eight years it has jumped to between ₦1.5 m and ₦2.5 m. The same trend goes for its capital value between ₦ 4.2 m and ₦7.8 m in 1996 to ₦15 m in 2004.

Table 5 shows rental and capital values for commercial properties. Office rental in 1996 was between ₦2,300 and ₦2,500/m<sup>2</sup> with a capital value of between ₦26 m and ₦37 m. In year 2004, office rent has jumped to ₦15,000/m<sup>2</sup> and capital value ₦225 m.

**Social impact of land use change:** From oral interview conducted among the dwellers and commuters of Victoria Island in conjunction with the physical inspection of the area, the following problems were identified as a result of change in use:

**Congestion:** Heavy traffic and pedestrian congestion have now become a regular phenomenon especially during the working hours of the day.

**Over-stretched facilities:** Infrastructural facilities such as water, electricity, drainage and even vehicular roads are now overstretched due to the unplanned larger population working and living in the Island.

Table 2: Land use determinants in victoria island

Factors	Frequency	(%)
Planning regulations	3	3.33
Demand and supply	59	65.55
Infrastructural facilities	5	5.55
Accessibility	8	8.88
Complementarity	15	16.66
Total	90	100.00

Field survey, 2005

Table 3: Major changes in land use

Types of changes	Frequency of respondents	(%)
New roads	0	0.00
Residential to recreation	5	5.55
Residential to commercial	71	78.88
Commercial to residential	0	0.00
Residential to industrial	1	1.11
Residential to institutional	1	1.11
Residential to religious	12	13.33
Total	90	100.00

Field survey, 2005

Table 4: Analysis of rental and capital values in victoria island residential properties in naira (₦)

Location	1996		2000		2004	
	Rental value (₦)	Capital value (₦)	Rental value (₦)	Capital value (₦)	Rental value (₦)	Capital value (₦)
<b>Bar beach area</b>						
Mini flat	700,000	840,000	930,000	1 m	2.0 m	15 m
Bed room flat	350,000	4.2 m	420,000	4.8 m	1.4 m	10 m
Bed room flat	650,000	7.8 m	720,000	8.4 m	2.5 m	15 m
Duplex house	700,000	8.4 m	820,000	9.6 m	5.0 m	70 m
Semi detached house	1 m	12.0 m	1.3 m	14.4 m	5.5 m	75 m
Detached house	900,000	10.8 m	1 m	12.0 m	5.5 m	80 m
<b>Law school/1004 flats area</b>						
Mini flat	700,000	840,000	900,000	1 m	1.8 m	15 m
Bed room flat	350,000	4.2 m	400,000	4.5 m	1.4 m	10 m
Bed room flat	600,000	7.5 m	700,000	8.0 m	2.5 m	14 m
Duplex house	700,000	8.4 m	780,000	9.6 m	5.0 m	70 m
Semi detached house	1 m	12.0 m	1.3 m	14.4 m	5.5 m	75 m
Detached house	900,000	10.8 m	1 m	12.0 m	5.0 m	80 m
<b>Victoria island annex area</b>						
Mini flat	60-120,000	720-1.2 m	260,000	1.5 m	400,000	8.5 m
Bed room flat	-	-	-	-	-	-
Bed room flat	350-650	4.2M-6 m	680,000	6.8 m	1 m	15 m
Duplex house	500-650	6M-15 m	840,000	20 m	1.4 m	60 m
Semi detached house	700,000	8.8-18 m	1.2 m	25 m	1.8-3.5m	75 m
Detached house	650-1 m	7.8-28 m	1.6 m	35 m	2.5-3.5 m	80 m

Field survey, Jan 2005

Table 5: Analysis of rental and capital values in victoria island (Commercial properties)

Location	1996 (N m <sup>-2</sup> )		2000 (N m <sup>-2</sup> )		2004 (N m <sup>-2</sup> )	
	Rental value	Capital value N'000	Renta value	Capital value N'000	Rental value	Capital value N'000
<b>Bar beach area</b>						
Shop	-	-	400	6,000	600	9,000
Super market	1,800	27,500	2,300	35,000	3,500	52,500
Purpose built office/High rise	2,500	37,500	3,500-5,000	65,000	1,500	225,00
<b>Law school/1004 flats area</b>						
Shop	-	-	400	6,000	600	9,000
Super market	1,500	22,500	2,000	30,000	3,500	52,500
Purpose built office/high rise	2,500	37,500	3,500	60,000	15,000	225,03
<b>Victoria island annex area</b>						
Shop	350	5,250	500	6,000	700	11,000
Super market	1,750	26,250	2,500	37,500	3,500	55,000
Purpose built office/high rise	2,300	26,000	3,000	48,000	15,000	225,000

Field survey, Jan 2005

**Noise pollution:** Almost every building on the Island keeps high power electricity plant as a result of incessant power outage from the public mains due to over population. The noise from these generating sets combined with horn blares from commercial buses pollute the peaceful serene that characterized the environment in the 1970's.

The study reveals that the factors of demand and supply are the major determinants of land use in Victoria Island, Lagos. About 65.55% of the surveyed population attested to this. Increase in demand for commercial properties have led to conversion of residential properties (which was the predominant use in the area) to commercial use. The ineffectiveness of town planning regulations could not stop this illegal conversion. Four percent of the respondents confirmed this assertion. A drastic change of land use has therefore occurred on the Island in the last ten years. Amongst the major changes is the conversion of the Island from residential to commercial uses. 78.88% of the surveyed population confirmed this fact. This finding confirms the earlier work of Oke (1999) in his study on Allen Avenue, Opebi and Toyin Streets Ikeja, Lagos. This change in land use in the study area has also brought about corresponding changes in property values. Table 4 and 5 show the high trend of property values between 1996 and 2004. Due to increase in economic activities in the area, business activities soared and this led to increase in demand for commercial properties. As a result of relative inelasticity of supply, prices rose drastically leading to rises in property values.

The change in land use from residential to commercial also create some problems traffic congestion, lack of adequate parking space, as a result of increase vehicular traffic, over concentration of commercial land uses to the detriment of other equally important uses like recreation.

## CONCLUSION AND RECOMMENDATIONS

From the various finds of this study, it can be concluded that Victoria Island land use had undergone a substantial level of change from residential use to commercial with the latter becoming more prevalent. Alongside this change is a corresponding increase in both rental and capital values of the properties on the Island. Influx of commercial activities from Lagos Island has been a major contributor to these actions and afterward, the advantage of complementarity becomes the factor attracting more business activities into the area. The increase in demand for commercial use in turn leads to increase in property values. This change in land use leading to higher property values has its attendant problems of traffic congestion, over stretching of infrastructural facilities and reduction of land area for parking, open space and relaxation sports.

On a final note, changes in any form and in any society is inevitable, it has become part of an urban growth. For economic reasons, property (land and buildings) will continue to change in use from a lower order to a higher order status in order to attain optimal use. Such changes usually result into properties being put to its highest and best use culminating in higher economic value. It is important that, before the status of towns are changed, there must be adequate land use planning to take care of the change. Adequate structures should be put in place to accommodate the increased commercial activities that such changes will bring about. Even though, economic argument for higher and best use cum higher property values is understandable, the dearth of residential accommodation in a city like Lagos cannot be waved away. Hence, development control mechanisms should be adequately positioned for maximum effectiveness. Despite the fact that there exist planning offices in the study area, their effectiveness has been

called to question. The Town Planning Authority should also enforce planning laws to allow for balance in land allocation for various uses.

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