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Spatial Variations of Values of Residential Land Use in Lagos Metropolis (Pp. 381-403)

Leke Oduwaye -Department of Urban and Regional Planning, University of Lagos, Akoka, Lagos. leodwa@yahoo.com ; oduwaye@unilag.edu.ng

Abstract

The cost of land has very strong influence on the quality and type of development that can be sustained on such land. Residential areas are no exception. This is more pronounced in economically vibrant. Lagos being the economic nerve centre of Nigeria fall into this category cities. This study is therefore to further enrich existing literature in this area but focusing on residential land values in Metropolitan Lagos. In the study, the actual prices of various components of residential land use are established which the study classified into rent, purchase price of residential apartments and purchase price of residential plots of land. This was done for different residential land use types which the study classified into three: namely high density, medium density and low density areas. The study concludes that residential land values are high in the low density areas and lower at the high density areas. The paper suggests the need to improve both physical and economic access to residential properties, privatization of the supply of infrastructural facilities, improvement in the quality of the environment and the need to release lands under public ownership to make more land available for residential use.

Keywords: Residential, Land Value, Neighbourhood, Rent, Cost, Land.

Introduction

There exist literature on urban land use values and environmental planning. They are research works on land values on cities in developed and developing regions cities of the world but a comprehensive study on Lagos, the case study are does not exist. Lagos, like dominant cities in all regions of the world is a leading economic and cultural centre of Nigeria and land is one of the most critical factors in economic and cultural development in human civilization. Therefore the need for information on the land use of Lagos should be of utmost importance. Generally, cities are important indicators of societal development due to their unique roles as centres of innovation, investment; diffusion and growth points cities therefore propel the growth of societies and are able to attract to themselves large numbers of people from the hinterlands. The centripetal nature of cities creates intense pressure on the economic and spatial structure of urban systems such as on services and facilities because the provisions of these facilities are expanding at rates slower than the rates of growth of the urban population, thus creating land. This intense pressure created by market forces of demand and supply, especially on land which is the focus of this study are basic factors influencing variation in land values in urban areas. This variation is usually highly pronounced in residential land areas. The way residential areas are structured in cities affects urban dwellers lives both positively and negatively.

The positive effects manifest in rise in residential land use values due to increase in demand in a situation where there is usually scarcity of available land in the market that can readily be developed. On the negative side, the pressure on the land most often lead to development of illegal buildings and sub-standard houses due to the inability of government agencies in charge of land use development control to cope with the rate at which development takes place.

It is on this note that this study investigates and analysis residential land values in metropolitan Lagos. The study unraveled the spatial variation of the different categories of residential neighbourhoods in Lagos which the study classified into high, medium and low density residential neighbourhoods. The focus of the research is to fill exciting gap in literature since no recent study in available on the scope of the research. The importance of the research to physical development is the need to provide

policy responses that would enhance judicious and suitable land use in the study area especially for residential purposes.

Literature Review and Conceptual Frame Work

The critical position of urban areas in human development has been of great concern to scholars, policy makers and urban dwellers. Therefore, research into urban areas has been of great interest. This has been confirmed through the works of many urban researchers such as in the work of Mabogunje (1968) who examined the distribution and characteristics of residential districts in Lagos. Mabogunje (1968) noted that areas which are district 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. Ayeni's study confirmed that the spatial structure of the city is usually the outcome of two interdependent elements-the location of housing stock and activities. 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. The divisions he identified are the Government Reservation Areas (GRAs), which in most cities generate positive effects, because they are always well 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 are the old or 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 rule, 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 laws 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 develops its own sub-city, its own sector, and expands outward along its fringe. The study by Okpala (1981) showed that residential mobility plays a very important role in the smooth functioning of urban housing markets. According to Okpala, residential mobility facilitates 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, the study confirmed increasing environmental restructuring in the planned residential estate, due to the fact that the

designed environment does not satisfy residents' aspirations. Adindu and Ogbonna's (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's (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, and the drastic fall in the exchange value of the Naira vis-à-vis the currencies of foreign countries from which most buildings materials are sourced.

On land values, Olaore's (1991) research was on land values in Kaduna during which he desegregated the municipality into residential neighbourhoods of fairly comparable characteristics to determine the land values. Olaore's findings revealed that the land value surface of Kaduna is highest in the Central Business District (CBD) with a structure of ridges and valleys patterned towards the city periphery. Also Morenikeji's (1998) study was on the analysis of the rental value structure of residential buildings in Minna between 1980 and 1996. He identified three types of housing in Minna which are the traditional compound type, modern compound type and modern flat type. Onibokun's (1985) assertion was that the quality of urban residential areas has profound influence on the health, efficiency, social behaviour, satisfaction and general welfare of any community.

Recent studies on urban areas relevant to this study are the research on urban land values and urban planning regions of Benin-City by Okoror (2005) in which he investigated the relationships between land values in Benin and socio-spatial data in neighbourhoods in Benin. The study confirmed strong relationships between locations and socio-economic traits in Benin and he established six planning sub regions namely urban agglomeration at road intersections, urban poor and blighted areas and peripheral sub-regions in dilemma. Also Aluko and Olawuni (2002) study was on regularingship land titling problems in squatter settlements in Lagos. Their study revealed that a perceived incongruence exist between the need for cost recovery and the need to keep solutions accessible to residents. They concluded that rather than for government to continue romatisation of the circumstances under which squatters live, it is essential that the right of squatters to continue occupancy of their land be recognized and where possible legalized.

Asaju and Olawunmi (2002) study was on rental housing market in Osogbo in which they delve into the patterns of residential development and factors for the patterns, variations in rental between classes and within classes of residential properties. This study revealed that residential property rents in Oshogbo was influenced by type of finishes, population changes, general level of prosperity and vacancy level. The study by Aina and Somefun (2007) was on the effects of facilities provision on rental values of residential properties in Ikeja Lagos. The study revealed that in Ikeja arbitrary rental values are placed on properties with or without the basic quantity and properties of facilities and that residents refused to look for cheaper or alternative accommodation due to other favourable factors such as the centrality of Ikeja (location), accessibility and expanding commercial activities in the area. Oni, Ajibola and Oloyede (2007) was on rent control and residential property values in Lagos State, in which they researched into statutory control method of determining standard rents. They discovered that rent control has no impact on property values in Lagos State. The discussions above call for adequate research into residential land values in order to guide policy direction of government and individuals. The need to investigate the relationship between urban residential areas and urban land values is critical for any meaningful urban planning. This is due to the fact that appropriate locations for different residential areas can be generated through the outcome of such investigation rather than existing subjective decision making of residential land use distribution by policy makers.

Conceptual Frame Work

Concepts relevant to this study are the concept of accessibility, intra-urban location bid-rent model and the concept of residential land value

The Concept of Accessibility

The earliest explanation on land use and land values was provided by Von Thunen (1893) in his monograph in which he developed a deductive model of agricultural land using numerical data from his own estate in 1826. The outcome of his model was a set of his own set of concentric zones around a fixed point (the town). Each zone defined in terms of crop specialization with distance from the centre being inversely associated with land intensity of production. He discovered that net yields per acre were higher with land used for intensive crops and these are able to acquire the most accessible and expensive sites.

Ricardo, (1817) provided the basis and all-embracing analysis of agricultural land issue. According to Ricardo a farmer wishing to lease a piece of land is in competition with other farmers will be able to rent it only if he makes the best offer. To chapel the farmer pay the rent, the output of his farm must be higher, then the farmer can afford, a higher rent if the land is nearer to the market as this will reduce the cost of transport. Therefore different land rents are obtained for land in different locations.

The relationship between locations of land uses advocated by Weber (1899), Ratcliffe (1949), Losch (1954), and Isard (1966) was developed further in the work of Alonso (1964) using the concept of Bid-Rent function. The Bid-Rent function, according to Alonso's thesis, is a hypothetical space profit function showing how land use is ultimately determined by the relative efficiency of the ability, of a use to extract economic utility from a site. The use that can extract the greatest return from a given site will be the successful bidder. Consequently, there emerges an ordinary pattern of land use, spatially organized to perform most efficiently the economic functions that characterizes urban life. Therefore, the city spatial structure depicts functional ability to pay rent against distance from a single most accessible core.

The Concept of Residential Land Value

A lot of debates on the concept of value and their determinants as it relates to land use exist, but the major point of controversy has been on attempts to distinguish between value and market price. The market value or market price of a particular interest in landed property may be defined as “the amount of money which can be obtained for the interest at a particular time from persons able and willing to purchase it” (Lawrence et al., 1962). Market price could also be defined as the highest price in terms of money which a property should bring in the competitive and open market under all conditions requisite to the fair sale, the buyer and seller each acting prudently, knowledgeably and assuming the price is not affected by undue stimulus.

Value is not intrinsic but results from estimates made subjectively by able and willing purchasers of the benefit or satisfaction they will derive from ownership of the interest. Ajayi (1997) stated further that, following the International Assets Valuation Standards Committee (TIAVSC) in 1992 a new definition of market value has been accepted worldwide. The TIAVSC

report guideline defined market value as the estimated amount for which an asset should exchange on the date of valuation between a willing buyer and willing sellers in arms length transaction, after proper marketing, wherein the parties had each acted knowledgeably, prudent and without compulsion. Thus in this research the market price of the residential land uses at the date of conducting the survey has been taken as the market values.

There are many factors influencing urban residential land values. These factors can broadly be classified into four. These are socio-economic, physical, environmental, infrastructure and institutional factors (Litchfield, 1974) Socio-economic factors influencing urban land values can be viewed from sociology, geography and economics perspectives. To the sociologist, it is the human being and his psychology, which is the key to the process of urban structure and pattern. Other specific social factors influencing land values are quality of neighbourhood, security, prestige, taste, ethnic and social areas. The geographers place emphasis on such things as relief, elevation, climate, location and geology. The economist suggests that it is the economics, which are to be obtained from using a particular piece of land, for example for its accessibility and centrality that influences land values. The economist also considers the issue of scarcity, demand, nature of use, agglomeration economies, expected revenue, speculation and intervening opportunities. Physical and environmental factors influencing residential land values are nature of environment, climate, soil, topography, drainage and quality of water bodies. For example, topography effect on a site amenity ranking would vary from family to family depending on their composition and preference. Topography could have a bearing on land use and land values through its effects on development cost. Critical to urban land use decision is also the level of infrastructural facilities in different parts of the city (Litchfield, 1974). These statements have been supported by Ayeni (1979), in his study on the spatial interaction and structure of Lagos.

Also in a study by Olaore (1991), 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 values namely access roads, good drainage, electricity, public water supply and telephone. Where these facilities are adequately available, the land values will be high in such areas. Institutional factors affecting urban land values include local customs, traditions, laws, organizations and other institutions of human society. Among planning instruments which influence

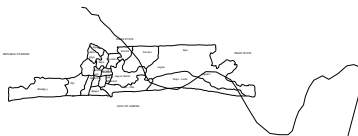
land values are the master plan, zoning regulations, rent laws, land acquisition policies, sources of title and type of tenure.

The Case Study Area

Metropolitan Lagos is located in the south-western part of Nigeria. It is the largest metropolitan area in Nigeria (Ayeni, 1979). Along the southern boundary of the state area in the west are Ojo and Ijanikin settlements and Lekki settlements form the eastern boundary, while the northern boundary are land mass of Ikorodu in Ikorodu Local Government Area and Alagbado towards Abeokuta in Ifako-Ijaiye and Alimosho Local Government Area which also has common boundary with Sango-Otta, a satellite town of Lagos. Badagry and Republic of Benin land mass define the western boundary of the study area (Figures 1 and 2). Lagos metropolis lies generally on low land, with about 20000 hectares of built-up area. The projected population by the Lagos State Government 2002 is 15 million. Two dominant religious groups in Lagos are Christians and Muslims. Today, Lagos exerts influential and central role in Nigeria out of proportion to its land area. The significance of this role is due partly to its historical and cultural background and partly to its former role as the seat of national government.

The review of literature and personal reconnaissance survey showed that Lagos metropolis has 224 identifiable residential neighbourhoods. Such works can be found in Mabogunje (1986), Ayeni (1979), Sada (1979) and Lagos Metropolitan Master Plan (1985). The list of the areas characterized by identifiable residential neighbourhoods qualities selected are shown in Appendix 1 which shows the locations, names and boundaries of the selected residential density type.

Figure 1: Map of Lagos State



Source: Lagos State in Map

Figure 2: Map Showing Residential Neighbourhood Selected for Sampling



Source: Field Survey, 2007

Methodology

This is a survey study. The residential classification densities are used as the basis for residential classification in this study. Three types of residential density identified are: high density residential neighbourhoods, medium density residential neighbourhoods and low density residential neighbourhoods

The samples for this study are residential houses in the stratified neighbourhoods in the study area. In the three stratified residential neighbourhoods' types, from the field observation it was discovered that a typical high-density residential neighbourhood has an average of about 600 houses of which 2.5% of houses in each selected neighbourhoods were selected for sampling. By approximation, 16200 houses exist in all the high-density areas in the 27 neighbourhoods selected for questionnaire.

Since every 40th house was selected for questionnaire administration, it means that an average of 15 questionnaires was administered in each high density residential neighbourhood selected for questionnaire administration. The locations of the selected neighbourhoods are as shown in Appendix 1. In the medium density residential areas a total of 200 questionnaires were administered and returned. In the low density residential neighbourhood category, 150 houses were sampled. In all cases, the views of the head of property agencies in each area selected for sampling were sampled. Two property agents/experts in each selected neighbourhoods were given questionnaires in order to obtain their views on the issue under investigation. Data are presented on the socio-economic characteristics, physical and infrastructural facilities of the study area. The analysis of data are presented hereunder to highlight the determinants of residential land values based on

the rents of apartments, cost of purchase of apartments and cost of a plot of land in the three categories of high, medium and low density residential areas. The numbers of different types of residential neighbourhoods identified in the study are shown in Table 1.

From the Table 1, there are 184 high density residential neighbourhoods representing 82.14% of the total, while 20 (or 8.93%) are of medium density type, with 20 (or 8.93%) of the total being low density residential neighbourhood type. 47 (21%) of the total 224 residential neighbourhoods was selected for questionnaire administration and general sampling. This represents fairly well all the residential neighbourhoods both in terms of spatial spread, quantity and quality of information required. After the classification of the residential neighbourhoods in the study area into three types of identifiable residential categories, namely: high density, medium density and low density types, the selection of the total 21% of the total of 224 residential neighbourhoods were derived through systematic random picking from a list of neighbourhoods in each of the three stratified residential neighbourhoods types.

Table 2 shows the analysis of the neighbourhoods selected. Out of the 47 neighbourhoods selected for sampling 27 are in the high density category which represents 12.05% number of total neighbourhood selected for questionnaires administration. The figure of 27 also represents 15% out of the total of 184 numbers of high density residential neighbourhoods in Lagos metropolis. Also in the medium residential density category 10 neighbourhoods were selected for sampling. This represents 50% of the total of all the 20 numbers of medium density residential areas in the study area. In the low density category, 10 numbers were selected also representing 50% of all the low density areas in Lagos metropolis. In the overall context of 224 residential neighbourhoods in the study area the selected residential neighbourhoods as shown in Table 2 shows that high density, medium density and low density areas selected for sampling are 12.05%, 4.46% and 4.46% of the overall of 224 neighbourhoods in metropolitan Lagos. The graphic analysis of the sampled neighbourhoods depicting a fair representation and spatial spread is demonstrated in Figure 2.

Findings and Results

Socio-Economic Characteristics, Physical and Infrastructural Facilities

The study reveals that majority of the household heads are male with a figure of 616 (or 81.95%) most of whom are of adult age of above 21 years. Majority of the respondents are married of which 70.86% was recorded and only 1.33% of divorced case was recorded. This shows that households are more stable which is a confirmation of the traditional marital system of the dominant tribal groups in the study area. Household size is discovered to be between 7-8 persons. This shows an increased range when compared with the 6.3 persons per household in the 1985 Lagos Master Plan. Thus, the study concluded that this must have been due to the reduction rate of family fission which has led to increasing dependent ratio in Nigerian cities in the last two decades. Typical of any leading city at regional and national scale, the study revealed that the major occupational groups in Lagos are in the secondary and tertiary sectors, with a total figure of 565 (or 74.83%). The secondary sectors mainly manufacturing, small-scale industries and artisans constitute 152 (or 20.13%) of the total occupational sector in the study area. The primary sector is not significantly observed. Majority had at least secondary or technical school education and above of which a total of 643 (or 85.17%) was recorded. Thus, it can be concluded that the residents in Lagos have reasonable educational attainment. Age, marital status, educational attainment and income are discovered to possess high degree of correlation coefficient at 0.05 probability level with the following correlation coefficient respectively 0.003, 0.038 and 0.022. Six major buildings types were identified in the study area. These are: the Brazilian multi-family room types, bungalow flats, storey flats, semi-detached duplex and detached duplexes.

Open spaces around buildings are used for multiple purposes, which include children playing, car park, ceremonies and meetings, and display of wares. Activity such as gardening is not quite popular especially with the high and medium density neighbourhoods. Mixed land use and sizes of plots indicated significant co-efficient correlation figure of 0.166 and 0.294 at the probability level of 0.05, while building materials indicated weak and negative correlation of -0.042. The situation of infrastructural facilities is pathetic when this was done through questions asked from the respondents on the adequacies of the following services: electricity supply, portable water and police protection. All of them recorded high rate of inadequacies. At

0.05 probability level, the following correlation coefficient figures were recorded pipe borne water (0.134) while electricity supply indicated negative but significant correlation of -0.142 and negative weak correlation for water supply (-0.015).

Analysis of Residential Land Value Determinants in Metropolitan Lagos

Analysis of determinants of residential land values was done with the use of principal component analytical technique. Since the principal component technique produces components in descending order of importance, therefore its adoption in this study is an aid in reducing the variables into fewer numbers which account for as much as possible all the variables among the original variables. The results of the application of this technique are discussed in the following section of the paper.

For the purpose of this paper the six variables which have been established in literature and theoretical framework as prominent in influencing land values have been isolated as basis of analysis in this study. The results obtained in the matrix of correlation showed that all the variables have high degree positive relationships with one another. This confirms the validity of the theoretical framework. The score on the relationship between accessibility and transport improvement shows the highest positive association with a figure of .901. This means that improvement in transportation facilities especially roads brings about improved accessibility in the study area. Also, the relationship between the following recorded very high degree of positive relationship; transport and rent (.897), quality of environment and zoning regulation (.786) and accessibility and rent. The implication of the above is that improvement in transportation and accessibility will be expected to bring about higher rents, while improved quality of environment is as a result of effective implementations. Also, the correlation matrix revealed that there is high positive relationship between quality of basic facilities and quality of environment in which the correlation matrix figure of .638 has been obtained while the relationship between facilities and zoning recorded .743. This means that the better the facilities provided the more improved is the quality of the environment, while application of zoning also enhances the effective provision of basic facilities. Generally, the lowest correlation interrelationship figure recorded is .562 which is for relationship between facilities and accessibilities. This is still within the range of high coefficient level of co-variation. This means that all the factors identified as basic to influencing residential land values 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 factor independent of each other. The result of the extraction process when the six variables (determinants of residential land values) were subjected to principal component analysis reduced the factors into two which gives accounts of all the other factors. The first component is renamed infrastructural facilities and the second component renamed economic. The first factor has an Eigen value of 4.632 which is the relative magnitude and proportion of variance accounted for by the first variable. Usually the first Eigen value account for the highest variance in the data set. The first component also explains 66.171% of the variance of the data, while the first two components account for 84.214% of the variance of the data. As discussed earlier that the aim of the principal component is that of data reduction, thus not all the components or factors influencing residential land values are retained in the final rotation solution. The first two components which accounts for 84.214% of the variance in the data are retained.

This is based on the criterion that the two factor components have at least 5% of the total variation based on Spence's specification (Spence, 1986). The result of the component loading for each primary variable when they are subject to varimax rotation is that the first factor which accounts for 66.171% of the total variance loads highly on both infrastructural facilities and economic factors, whereas the second factor which account for 18.043% of the total variance loads relatively low both on infrastructural facilities and economic factors with figures .294 and .146 respectively. The implication of these figures is that infrastructural facilities improvement and economic factors are highly related in factor 1, while they are weakly related in factor 2. The implication of this that where there is improvement in infrastructural facilities there is expected to be improvement in economic variables, usually in form of increase in rent and prices of residential land use properties. Thus it can be concluded that these factors or components can be used to describe the spatial variations of residential land use in metropolitan Lagos.

Residential Property Values in High Density Neighbourhoods

The study revealed that the cost of rentals of residential apartments in the high density areas can be classified into five categories based on the amount of rent per annum. Those in the first category with the highest average rents of N250,000 (\$1600) per annum are ipodo (Ikeja), Idioro (Mushin) and Iponri. In the third category with an average rent of N210,00 per annum are

Onipanu (Shomolu), Akoka, Igbobi, Bariga, Ebute-metta, Iwaya-Onike, Egbeda and Itire. Those in the fourth category with an average rent of N150,000 per annum are Agege, Iju Isaga, Ojokoro, Ajegunle, Oshodi, Isolo, Mafoluku, Igando, Ipaja, Abule-Egba, Ojo and Ijanikin. The last category attracts an average rent of N120,000 per annum at Ikorodu and Iba.

Also in terms of sales residential apartments in the high density residential neighbourhoods, six categories are observed with Igbosere (Lagos Island) occupying the top position of above N10 million followed by Obalende (9.1-10 million), Ipodo (Ikeja) and Ebute-Metta where properties attracts between N5.1-6 million (table 3). The fourth group consists of Agege, Iju Isaga and Isolo which attracts N4.1-5 million. The fifth categories attracting between N3.1-4 million at Ajegunle, Onipanu, Akoka, Igbobi, Bariga, Iwaya, Idioro, Mafoluku, Iponri and Itire. Areas with the lowest prices of residential units which falls between the cost of N2.1-3 million are ojokoro, Ikorodu, Oshodi, Egbeda, Igando, Ipaja, Abule, Ojo, Ijanikin and Iba (see figure 2). The costs of residential plot land were also examined in the high density areas. The study revealed that seven classifications can be obtained with Igbosere and Obalende at the top cost of land at above N5 million (Table 3). At Onipanu, Igbobi, Ebute-metta, Iwaya, Itire and Idioro a plot of residential land goes for between N2-N4 million. A plot of land at Akoka, Bariga, Oshodi and Iponri goes for between N1-N2 million while at Agege, Isolo and Mafoluku a plot of land cost between N1.6-1.8. At Ajegunle, Egbeda, Ipaja and Abule-Egba, a plot of land goes for between N1.2-1.5 million while at Iju Isaga, Ojokoro, Ikorodo, Igando, Ojo and Ijanikin a plot of land costs between N750, 000 - N1 million. The cheapest residential plots can be obtained at Iba at a price of N700, 000. It can be observed that there is significant spatial spread of cost of residential apartment rentals, cost of purchase of apartment and cost of land.

This shows that different locations, in terms of quality of neighbourhoods, prestige and standard of infrastructural facilities. Therefore it means other factors such as nearness to central areas and nearness to place of work could be part of the major determinants influencing tenants especially on their decision of residential choice, since they can buy properties at the same amount in areas significantly spatially separated from each other, for example the case of Onipanu and Egbeda or Agege and Ijanikin or Ikorodu and Iba. These are areas though commanding the same rent levels but spatially of far distances away from one another.

Residential Property Values in Medium Density Neighbourhoods

It was observed that in the medium density residential areas, five categories of rental values of residential apartments can be observed. Ogudu (Ojota) rank highest with N275, 000 rent per annum. The second category commanding rent of an average figure of N250, 000 are Adeniyi Jones, Gbagada and Surulere. The third category is Opebi-Allen with average of N210, 000. Fourth is Anthony Mende with N180,000 while the last group of Ogba, Oworoshoki, Festac and Satellite towns attracting a rent of N150,000 per annum on the average. On the cost of outright purchase of residential apartments in the medium density areas, the study revealed that Ogudu (Ojota) again rank highest with a minimum figure of N6.1 million followed by Opebi-Allen (N5.1 million), the Adeniyi Jones and Surulere (N4.1 million), Obga, Oworoshoki, Anthony Mende, Gbagada, Festac and Satellite Town (N3.1 million) occupying the lowest position. The cost of a plot of residential land in the medium density area reveals that Allen-Opebi and Surulere (Adeniran Ogunsanya) jointly occupy the top position beating Ogudu to the second category. The reason for this is that both Opebi-Allen and Surulere are fast turning into commercial districts therefore most properties in these locations especially vacant lands are being sold as commercial plots whereas Ogudu still retains its residential zoning qualities. Therefore, Ogudu, Adeniyi Jones, Oworoshoki, Anthony Mende and Gbagada are in the second category attracting between N1.5-N2 million. The third category attracting between N600, 000 to N1 million are Ogba (Oke-Ira), Festac Town and Satellite Town (Table 4).

Again there are noticeable spatial spreads in the location of these neighbourhoods. Though most of them are located in the north-eastern and north central area while western part of Lagos metropolis. The decision of individual tenants to reside in any of these areas must have been influenced by other factors from rent. Such other factors like location to place of work must have been influential to tenants' decisions.

Residential Property Values in Low Density Neighbourhoods

The study revealed that in the low-density areas three categories of rental structure can be established with Ikoyi, Victoria Island, Ikeja GRA, Osborne and Park View occupying the top position with an average of N400, 000 of per annum. The second category attracts an average of N350, 000 of which Apapa GRA and Lekki belong to this category. Aja-Ilasan and Akodo

attracts an average rent of N300, 000 per annum. Also three categories of cost of outright purchase of residential apartments were established with Ikoyi, Victoria Island, Osborne and park View occupying the top position at average price of N12 million. This is followed by an average price of between N5.1-N6 million at Ikeja GRA, Apapa, Ibeju-Lekki and Lekki Peninsula that attracts between N4.1-N5 million. Interestingly except for Ikeja GRA other low density areas are not centrally have pronounced water fronts which include the Atlantic Ocean for Victoria Island, Osborne, Park View, Ajah and Lekki. The Apapa GRA and Ikoyi also front lagoons. Ikeja can be observed to be benefiting from centrality when compared with other low density estates in terms of land and apartment rentals and purchase.

Recommendations

Suggestions in this study are structured into broad areas viz: how to improve the level of accessibility to and within residential land use, provision of technical infrastructure and how to enhance the ability of the residents of metropolitan Lagos in paying or purchasing residential apartments and the need to improve the qualities of residential neighbourhoods.

This study discovered that the major traffic movements in Lagos are north to south, Ikorodu, Abule-Egba, Alagbado to Ikeja, Apapa, Lagos Island axis and the east-west movement from Oworonshoki to Apapa-Ojo and Ijanikin movement. These routes are connected with three main expressways. Major institutional land uses have remained major obstacles towards alleviating traffic movement in the city of Lagos. Accessibility through the major traffic system, which is road, can be improved if these major institutional land uses can allow their unused land areas to be opened-up as arterial roads. These major institutional uses the Apapa-Kirikiri Barracks, Maryland and Ojo Cantonment on one hand and the Muritala Local and International Airports on the other. This will improve traffic flow and enhance property values along these new routes. It will also encourage unbuilt residential land owners to commence housing construction on their sites which are presently being shielded and made inaccessible form major employment areas of the city. To improve access to land there is also need to put in place urban residential land use information system. This will assist the residents in Lagos to have comprehensive information about quality and quantity of land in terms of prices, types, number and actual locations where residential apartment are

available. Appreciable efforts are being made towards this by estate firms especially through advertisements in the print media.

Level of infrastructural facilities available in residential neighbourhoods in metropolitan Lagos has been confirmed in this study as major determinant of residential land values. This cut across the views of respondents in all the neighbourhood categories. Since this is a critical issue, more efforts and improved strategies are required. This is critical in the area of constant electricity supply, good road network and telephone service. While the government has accepted the fact that she can no longer cope with the provision and maintenance of these facilities, the need to fully involve the private sector is inevitable so that the government can devote more attention to other pressing socio-cultural and political problems.

The first major step towards rent control might not be through rent legislation as this has proved to be ineffective. It is a common knowledge that in the area of housing, government always find it difficult to control what is not her own. Therefore there is need for government to provide houses at local government levels in metropolitan Lagos on rental basis along with the present Lagos State and Federal government owner-occupier and site and service schemes. Governments should build rental apartments in all local government areas and then set the pace for the rent. In order to increase the stock of such houses in the market, private housing developers and corporate bodies through the various labour unions should encourage formation of housing co-operative societies

Flooding in metropolitan Lagos is mainly due to blocked drainage channels. These could be given to private bodies to maintain with the government, especially at local levels, paying for such services. This will be easier to monitor and appropriated punishment meted on erring contractors. This will be more efficient than the present structure where civil servants are expected to clean the drainage channels. Noise pollution can be best tackled with through appropriate legislation and public enlightenment on the adverse effect. Such social ills especially in neighbourhoods where parts of apartments are converted into commercial premises such as hotels, beer parlours, restaurants or where people just advertise their wares through the use of loud speakers within residential neighbourhoods. The present effort of government on domestic waste collection through the private sector participation scheme should be sustained and improved upon especially in

the light of the recent glaring deficiencies of the scheme. There is need to unfrozen acquired residential lands.

The present land acquisition by government and speculative tendencies of individuals, both of which have resulted into land banking of large tracks of land in both built-up, central and peripheral areas of Lagos require urgent attention. Most of these lands when sold are not used for residential purposes for which they were zoned. This has led to acute of residential land in built-up areas as most of these plots are used for commercial purposes such as shopping complexes, petrol stations and neither into the market nor used for any scheme. They are simply frozen and vacant. There is need for deliberate government policy to discourage these phenomena. This paper recommends the need for urban land ceiling, thus establishing maximum land area that could be left undeveloped in built-up residential areas in Lagos.

Conclusion

Shelter is among the basic human needs. The quality of residential neighbourhoods will go a long way in influencing the quality of lives. The better the quality of residential areas the more improved all facets of an household. Therefore, this research has been an attempt to unravel the residential land value phenomena in a leading Africa city south of Sahara. The findings of this research have shown that there are many socio-economic, physical, environmental and infrastructural factors influencing land values in Lagos, Nigeria. The study therefore recommends specific measures which will aid the improvement of residential land use and land values in Lagos. These measures include the need to improve intra-city physical accessibility particularly through improved road network. The paper also suggests the need to improve the economy so that city dwellers will have improved economic means which will positively affect their access to residential properties. Improved economic power of households will also have positive correlation with their capacity to support better infrastructural facilities. Government should also provide rental housing at all levels, as a means of influencing and arresting high rent. To improve the quality of residential environment specific legislations should be enacted to take care of different environmental problems identified in this paper.

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Table 1: Residential Neighbourhood Types in the Study Area

Type of Residential Neighbourhood	Number	% of Total
High density	184	82.14
Medium Density	20	8.93
Low Density	20	8.93
Total	224	100.00

Source: Field Survey, 2007

Table 2: Analysis of Residential Neighbourhood Categories Selected for Questionnaire Administration

Type of Residential Neighbourhood	Number of neighborhood types	Number of neighborhood selected	% sample in each selected category	% representation in the overall number of residential neighbourhood sampled
High density	184	27	15	12.05
Medium Density	20	10	50	4.46
Low Density	20	10	50	4.46
Total	224	47		21% of 224

Source: Field Survey, 2007

Table 3: Classification of Cost of Land in High Density Residential Neighbourhoods

Categories	Average Rent Per (000 Naira)	Neighbourhoods	No.	% of Total
A	Above N5000	Igbosere (Lagos Island), Obalende, Ipodo (Ikeja)	3	11.11
B	N2000-4000	Onipanu, Igbobi, Ebute-metta, Iwaya, Itire, Idioro	6	22.22
C	N1000-N2000	Akoka, Bariga, Oshodi, Iponri	4	14.82
D	N16000-N18000	Agege, Isolo, Mafoluku	3	11.11
E	N12000-N15000	Ajegunle, Egbeda, Ipaja, Abule-Egba	4	14.48
F	N750-N1000	Iju Isaga, Ojokoro, Ikorodu, Igando, Ojo, Ijanikin	6	22.22
G	N700	Iba	1	3.70
Total			27	

Source: Field Survey, 20076

Spatial Variations of Values of Residential Land use in Lagos Metropolise

Table 4: Estimated Prices of a Plot of Land in Medium Density Residential Neighbourhoods (N000)

S/N	Neighbourhoods	N1000-2000	N2500-3000	Above 3000	Rank
1	Ogba/Oke-Ira	□□			C
2	Adeniyi Jones		□□		B
3	Opebi-Allen			□□	A
4	Oworonshoki		□□		B
5	Anthony Mende		□□		B
6	Ojota Ogudu		□□		B
7	Gbagada		□□		B
8	Surulere/Adeniran Ogunsanya			□□	A
9	Ffestac-Town	□□			C
10	Satellite Town	□□ □			C

Source: Field Survey, 2007

Table 5: Estimated Prices of a Plot of Land in Medium Density Residential Neighbourhoods (Million Naira)

S/N	NEIGHBOURHOODS	N2-5m	Above 5m	Rank
1	GRA IKEJA		□□□	C
2	APAPA GRA		□□□	B
3	VICTORIA ISLAND		□□□	A
4	AJAH/LASAN	□□		B
5	IKOYI		□□□	B
6	IBEJU-LEKKI	□□		B
7	OSBORNE		□□□	B
8	PARK VIEW		□□□	A
9	AKODO	□□		C
10	LEKKI PENINSULA		□□□	C

Source: Field Survey, 2007

Appendix 1: List of Selected Residential Neighbourhoods in Which Questionnaires Were Administered With Names of Boundary Street/Roads.

S/N	NEIGHBOURHOOD TYPES AND NAMES	
A	HIGH DENSITY AREAS	BOUNDARIES
1	Agege/Oko-Oba	Orile Road, Omotoye Street, Ipaja Road and Motor Road
2	Iju Ishaga	Yaya Abatan Street, Ajayi Street, Oke Street and Isheri Road.
3	Okoro	Abeokuta Express Way, Agege Motor Road, Progress College Road and Abiodun Onitiri Avenue
4	Ipodo/Seriki Aro	Kodeso Street, Mobolaji Bank Anthony way, Olowu Street and Agege motor Road.
5	Ajegunle	Ikorodu Road, Oladele Street, Adelogo Street and Akanimodo Market
6	Onipanu/Somolu	Ikorodu Road, Ilupeju Road, Fagbile Street and Bode Thomas Street
7	Akoka	Saint Finbarrs Road, Tijani Ashogbon Road, Abeokuta Street, Alake Street and Community Road
8	Igbobi/Fadeyi	Olateju Street/Railway Line, Kayode Street, Ikorodu Road and Western Avenue
9	Bariga	Okuta Road, Jagunmolu Street, Apapa-Oworonshoki Express Way and Oluwatoyin Street
10	Ikorodu	Lagos Road, Ayangburin Road, Awolowo Road and Ireshe Road
11	Ebute-Metta	Murtala Mohammed Way, Herbert Macaulay Road, Adekunle Street and Adams Street.
12	Iwaya-Onike	Onike Road, Olumo Street, Igbore Street, Abdul Karim Street and Oyadiran Road
13	Idiroso-(Mushin)	Olateju Street, Owoniran/Bishop Street, Agege Motor Road and Ojuelegba Road
14	Oshodi	Agege Motor Road, Oyetayo Street, Adeyemi Street, Folorunsho Street and Oshodi Road
15	Isolo	Isolo Road, Iyewa Road, Aregbe Street and Secretariat Road
16	Mafoluku	Makinde Street, Raji Abayomi Street, Anthony Obe Street and Rufai Ilugu Street
17	Egbeda	Akowonjo Road, Idimu Road, Orelope Road, Moleku Street And Rufai Ilugu Street
18	Igando	LASU – Iyana Iba Road, Ikotun Road, Association Road, Igando Road
19	Ipaja	Ayobo Road, Barrack Road, Ogundele Road, Osoba Street and Asalu Lawal Street
20	Abule-Egba/Alagbado.	Abeokuta Expressway, Otta Road and Ekoru Road
21	Ojo	Olojo Road, Badagry Expressway, Palace Road and Kemberi Street
22	Ijanikin	Badagry Expressway, Awori Road, Oloto Road and Dabiri Street
23	Iba	LASU – Isheri Road, Ijagemo Road, Agboroko Road and Illo Street
24	Iponri	Apapa – Oworonsoke Expressway, Community Road, Lagos-Badagry

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		Expressway and Okoya Street
25	Itire	Apapa – Oworonsoki Expressway, Imam Mamodu Street, Teniola Street and Adesina Street
26	Igbosere/Campus (Lagos Island)	Igbosere Road, Simpson Street, Okepopo Street, Isalegangan Street and Bamgbose Street
27	Obalende	Obalende Road, Saint Gregory Street, Awolowo Road and Ribadu Road
B	MEDIUM DENSITY AREAS	BOUNDARIES
1	Ogba/Oke Ira	Isheri Road, Alhaji Kosoko Street, Takoyo Street and Alhaji Bakare Street.
2	Adeniyi Jones	Adeniyi Jones Avenue, Ayodele Diyan Street, Idera Street and Oduduwa Street
3	Oworonshoki	Ibrahim Babandiga Boulevard, Oworo Street, Idera Street and Oduduwa Street
4	Anthony/Mende	Ikorodu Road, Sunmola Street, Adekoya Street and Campground Road
5	Ojota-Ogudu	Ibrahim Babangida Boulevard, Salawudeen Street and Ogudu Road
6	Gbagada	Ibrahim Babangida Boulevard, Ilawe Street, Sogbami Street and Apapa-Oworonsoki Expressway
7	Surulere/Adeniran Ogunsanya	Adeniran Ogunsanya, Karimu Kotun Street, Gbajumo Street and Alhaji Onitana Street
8	Festac Town	2 nd Avenue, 4 th Avenue, 5 th Avenue and 7 th Avenue
9	Satellite	Ijegun, Egba Road, Akintola Maja Avenue, Chief Lawrence Oregun Road and Community Road.
10	Opebi-Allen	Opebi Road, Allen Avenue, Wole Ogunjimi Street and Awolowo way
C	LOW DENSITY AREAS	BOUNDARIES
1	Ikeja GRA	Mobolaji Bank – Anthony way, Sobo Arobiolu Street, Joe Ogunnaike Street
2	Apapa GRA	Marine Road, Apapa – Oworonsoki Expressway and Park Lane
3	Victoria Island	Bishop Oluwole Cole Street, Ligali Ayorinde Avenue, Marinho Drive and Ademola Street
4	Ajah/Ilasan	New Epe Expressway, Ikote Road, Ado Road and Araromi Road
5	Ikoyi	Lateef Jakande Road, Bourdillon Road, and Alexander Road
6	Ibju-Lekki	New Epe Expressway, Coastal Road, Imegbon Road and Kajola Road
7	Osborne Foreshore	Osborne Road, Lagoon front, and Ikoyi Crescent
8	Parkview	Gerald Street, Lagoon front and Alexander Road
9	Akodo	Magbon Road, Museyi Road and Coastal Road
10	Lekki Peninsula	Admiralty Road, Creek front and New Epe Expressway

Source: Field Survey, 2007