

# Impact of Road Rehabilitation on Property Value: A Case of Lasu-Isheri Road, Igando, Lagos State

Mayowa Jimi-Oni & Afolasade Olubumi Oluwatobi

Department of Estate Management  
Covenant University Ota, Nigeria.  
mayowa.jimi-oni@stu.cu.edu.ng,  
odunayo94.mjo@gmail.com  
afolasade.oluwatobi@covenantuniversity.edu.ng

**Abstract:** The importance of transportation cannot be de-emphasized either in a city, town or neighbourhood. The necessity that every area should possess quality transportation systems as well as good road networks that can serve the present population and ease movement cannot be ignored. The research therefore aims at assessing the impact of road rehabilitation on property values using Lasu-Isheri road Lagos as a case study. To achieve this, the residents and Estate Surveyors and Valuers in the study area and Ikeja respectively were consulted to get information to aid in arriving at a reasonable conclusion. Questionnaires were administered to 84 residents in the study area while 73 (87%) was retrieved and 52 to the Estate Surveyors and Valuers who have management properties in the study area, 44 (85%) was retrieved. Analysis and Presentation of data were done using frequency tables and percentages, mean. The study revealed that road rehabilitation majorly has a positive effect on areas where it was carried out; hence it is recommended that government should keep rehabilitating roads both to their benefit and that of the residents in the area. This will help enhance the economic development of the area, increasing land and rental values and also encourage developers to invest.

**Keywords:** Estate Surveyor and valuer, Lagos, Lasu-Isheri, Property Value, Road rehabilitation,.

## 1. Introduction

It is a well-known fact that transportation is an integral part of any city, town, neighborhood or place whether rural or urban. It is therefore very necessary that every area should

possess quality transportation systems as well as good road networks that can serve the population and ease movement. However, whenever the population exceeds the available roads or they are found to be inadequate

(traffic), road rehabilitation has to be considered which can come in form of expansion of old roads or construction of entirely new ones.

The evident excess in a population's demand for road occurs via the increase in economic activities around the area. The growth of an urban area due to influx of people in search of employment usually takes its toll on the land and the built environment as related in Ajayi, Ojo, Olukolajo and Oyetunji (2013). It is the duty of the government to provide infrastructures where they are not available or are inadequate. However, the lack of town planning regulation makes expansion difficult, demolitions of residential and commercial properties including shops situated close to the routes pose same threat, provisions have to be made, which in turn means compensation has to be given to the affected parties or the government can exercise the power of compulsory acquisition.

In most cases the introduction of road rehabilitation proposes to be of benefit to the users and enhance property values after completion but during construction the benefits are not so evident in the short run as a result of equipment noises, dust, and inaccessibility during that period, especially to neighbouring areas if the construction last longer than planned. Mikelbank (2001) suggested that prices rise in response to transportation improvements that occur along shortest-path routes connecting individual homes to the region's CBD or to the local shopping center; in general, prices fell as a response to nearby transportation-related construction. However in California, Huang (1994) found that virtually every major land use study came to the conclusion that

transportation improvements positively affect the value of nearby land. Evidently, homeowners and renters always value improvements to the transportation network, whether their perception of the travel benefits is direct or indirect (Siethoff 2002). Ajayi, Ojo, Olukolajo and Oyetunji (2013) asserted that opening up of new roads usually lead to increased economic activities and higher land values among others. . Road construction take so much time especially when government refuse to supply funds intermittently, such project at times span for years making users and residents anticipate its completion. According to Ogboru (2009) during this phase, accessibility is hindered both for residential and commercial property owners even road users have to lay off the road for a while. It becomes very stressful for shop owners to get to their place of work every day, also flooding can occur as a result of the excavated drainages which accompanies the construction. It is on this note that this study strives to show the impact of road rehabilitation on the values of properties and its users

## **2. Literature Review**

Transportation and property are important in physical and economic development of towns and cities all over the world. Property and land values tend to increase in areas with expanding transportation networks, and increase less rapidly in areas without such improvements (Oni, 2009). Several studies have been conducted on the impact of road construction and rehabilitation on property values, they include; Akee (2006), Lacono and Levinson (2009), Aigbe, Ogundele and Aliu (2012), Alimi, Ayedun and Oni (2014)

For Instance in Canada, Stevenson (1995) study identified the social impact of major roads and its significant potential positive and negative changes in peoples' cultural traditions and lifestyles, their physical and psychological health, their families, their institutions and their community. The Social Impact Assessment (SIA) process can be streamlined by focusing socio-economic data collection on the public issues and possible local impacts. This approach was based on the principle of interaction with the public throughout the assessment, integration of the local community issues and data with the technical project studies, and iteration in the identification and resolution of the potential impacts. The paper concluded that the impacts of roads projects on people and their communities are important and are increasingly having greater influence on the route alignment decisions and roadway design.

Another study by Akee (2006) examined the impact of road construction on rural labor force outcomes in a developing country. This study aimed to document swift changes in economic activities due to the construction of a new road. Two national censuses were utilized which were conducted in the Republic of Palau five years apart (2000 and 2005) which conveniently bracket the road construction period. The data allowed the researcher to identify households that moved within the five year period, thereby correcting any internal movement attributable to the road construction. The researcher employed two different methods; a difference-in-difference procedure and first-difference procedure. It was discovered that households respond quickly to the

new employment opportunity once the new road is functional. The impact of road construction on average household wages and income was concluded to show no difference at all, it becomes negligible.

In Minnesota, Lacono and Levinson (2009) considered the improvements transportation networks, especially those in growing areas, tend to have on local land markets. They researched the nature and magnitude of benefits accruing to nearby properties that arise from major highway construction or reconstruction projects, specifically those that add capacity to existing highway. The research was carried out by selecting three Minnesota counties as case studies for further analysis. Data was collected on road improvements from a set of construction logs maintained by the Minnesota Department of Transportation (Mn/DOT), and three sets of property data which contain information on past property sales. The researchers used hedonic price models which helped to estimate the determinants of property values in a given location; two different approaches were used i.e. before-and-after technique for limited data, and for larger data, time slices were defined. The method of hedonic regression analysis was applied to the three Minnesota counties and they yielded mixed results in terms of observable changes to locational premiums or discounts associated with being located near an improved highway link. In most of the locations and property types analyzed in this study, no statistically significant change in property values were observed as a result of the construction or reconstruction projects under consideration. It was concluded that it is possible that the actual effects

of the highway improvement were positive, but were too small to be picked up by the statistical methods applied. However, in respect to road rehabilitation, depending on the type of improvement (construction of a new link, capacity addition to an existing link, or upgrading an existing link), the benefit could represent a reduction in the time cost of travel or other variable costs, such as fuel consumption or mileage-related vehicle depreciation. It could also represent an improvement to the level of access that a given transportation network provides.

Mkalala, Kamara, Ndong, Iluboudo, Baiod (2009) summarised the Environmental and Social Impact Assessment (ESIA) of the Aflao-Sanvee Conджи Road Rehabilitation Project in Togo. The researchers prepared an ESIA report in accordance with the environmental and social assessment guidelines and procedures of the African Development Bank for Category 1 projects. The environmental and social impacts were summarized and the inevitable impacts identified. Descriptions cover expected impacts during the preparation, road construction and operation phases. This was followed by the presentation of the enhancement and mitigative measures proposed to increase the benefits and/or prevent, minimize, attenuate or offset the negative impacts, as well as the monitoring program. The public consultations held during the ESIA and the complementary initiatives related to the Project such as the required compensation plan are discussed. Conclusively, the project was deemed acceptable on the environmental and social level under the conditions stated in the report. There was provision for compensation of the persons concerned.

In Nigeria, Aigbe, Ogundele and Aliu (2012) study examined road facility availability such as traffic light, street light and culvert; and the conditions of the roads in terms of smoothness, presence of potholes, and cleanliness. Data was generated from sixteen roads selected from the three senatorial districts of Lagos State. Simple descriptive statistics and the Road Maintenance and Quality Index (RMQI) were employed in the analysis of data generated. The findings of the study are imperatives for the strengthening and refocusing of existing road maintenance strategies that will deliver smooth, time saving, and comfortable roads. The paper conclusively stressed the need for timely and efficient maintenance of roads for improved road service delivery to upgrade the present negative effects of commuting and ensure smooth, easy, and comfortable ride on Lagos metropolitan roads.

South Korea's Hyunwoo, Du-Heon, Jai-Dong, Hee-Sung and Ju-Goang (2012) analyzed the direct-employment-creation effect of South Korea's expressway construction investments with the use of actual data. To determine the direct-employment-creation effects of expressway construction investments, multiple-regression analysis of data regarding 68 expressway sections were conducted. The creation of direct employment means the employment of manpower input directly to the works regarding the construction and maintenance of an expressway, so the employment can be determined clearly through the construction of an expressway. The results of the analysis indicated that the country's KRW (Korean won) 1 billion

worth of expressway construction investments created 7.27 full-time jobs.

Alimi, Ayedun and Oni (2014) in Lagos, Nigeria analyzed the relationship between road improvement and neighborhood properties value in selected parts of Lagos. The data were collected through questionnaire distributed among the residents (both landlord and tenants) of the selected area. The data were then analysed using simple descriptive and analytical statistics. It was deduced that majority of the respondents living in the study areas agreed that road improvements do lead to an increase in rental/capital values. Accessibility is a major factor that determines how much people are willing to pay for a particular location. The study recommended that the three tiers of government (i.e. Federal, State and Local) should take the construction, maintenance and rehabilitation of roads as a matter of great importance because landed property is an indicator of the wealth of a nation and their values can be enhanced through the provision of good roads. The amount of tax payable under the Land Use Charge Law of 2001 is dependent on the value of the property.

Gatauwa and Murungi (2015) analyzed the effects of infrastructure development on real estate values in Meru County, Kenya. The study aimed at establishing the effects of transport networks development, expansion of social amenities, industrial development, expansion of educational institutions and growth in commercial developments on real estate values in Meru County, Kenya. The descriptive survey research design was used in analyzing the data collected. The target population was 955 real estate property owners in Meru County, Kenya but

only 191 respondents was the sample size. Stratified sampling technique was used to come up with the sample. It was concluded that the effect of infrastructure development on real estate pricing is evident in Meru County; this is because Meru is one of the areas that have strategic development programs in place which attract investors and speculators. In relation to transportation (road) network, from the findings the study emphasizes it affects real estate values positively 7.462 times. The study goes further to recommend that County governments should create development programs which will open up the rural areas thereby ensuring an even spread of demand in the real estate property across the country and also encourage banks and other financial institutions to come up with financing programs which would be easily accessible to the public and improve ownership and investment in real estate sector.

Al-Mumaiz and Evdorides (2017) investigated the effect of interurban road construction on the adjacent land value which changed as a result of increasing accessibility. A multiple regression model was obtained to predict the percent change in land value (CLV) based on four independent variables namely; land distance from the constructed road, area of land, nature of land use and time from the works completion of the road. The random values of percent change in land value were generated using Microsoft Excel with range of up to 35%. The trends of change in land value with the four independent variables were determined from literature references. Distance variable of up to 3 miles from the road was being used to produce the model. A series of 0.5 mile distance from the new

road was used to study the percent CLV for each distance in the series. Time variable of 20 years after the road works completion and 3 years before was also used in this study with a series of 1 year to estimate the percent CLV for each year in the series. Land use variable gave the capabilities of calculating the percent CLV for different land use; three types of land use (agricultural, industrial, and residential) were used in this study. Land Area variables with a range of 10 to 80 hectare are used to produce the percent CLV for each area in the series. It was concluded that lands with the intermediate distance from the constructed road had the higher percent CLV due to the increase in accessibility and decrease in travel cost and these lands values decrease as the distance increases due to inaccessibility. The diversity in land use application is an important result in this study as recent studies have focused mainly on residential land use.

Conclusively, positive impacts occur usually when the road becomes open for use. A very major positive impact that road rehabilitation has is how it encourages employment. The employment creation effects of expressway construction can be classified into direct, indirect, and other employment creation effects. Direct employment creation refers to the employment of workers including construction workers, experts, engineers, and onsite managers for road construction and maintenance and repair. Indirect employment creation implied the employment of workers required for the production and procurement of construction materials, such as for the production and distribution of wood, cement, steel, and

petrochemicals. This was rightly expressed in Mkalala, Kamara, Ndong, Iluboubo and Baido, 2009; Hyunwoo et al, 2012; Akee, 2006 papers.

And also the road rehabilitation causes the displacement of residents according to Stevenson (1995) thereby resulting in inconvenience caused by detours, local road closures, dust, noise, heavy equipment traffic on existing roads, safety hazards, and interference with emergency services. However, resident may benefit from construction employment. When the roadway is opened for use, positive impact result for many residents; Travel time, gas consumption, accidents and inconvenience to users generally decrease. The roadway increases access to jobs, schools, stores, recreation and other community services and amenities. These effects can be reflected in increased land values. However, there may be negative impacts for some residents living near the roadway. These include increased noise, pollution and aesthetic impacts. Some of these impacts can be mitigated. Aigbe, Ogundele and Aliu (2012) explained that residents whose frontage are very close to potholes/failed sections of the roads often times prevent vehicular access on the remaining part of the road by barricading the road at these portions.

### **3. Research Method**

A total of 84 residents formed the sample size under this study. This represents about 70% of the entire study population. And in regards to the second study population, it consists of 52 practicing Estate firms in Ikeja. The rental values between the periods of 2007 - 2013 were also collated on different property types within the study area. It is however necessary to state

that the road rehabilitation was carried out between 2009 and 2010, hence the time before the rehabilitation was from 2007-2008 and after the rehabilitation was from 2011-2013. The analyses were carried out using descriptive statistics such as weighted mean, in addition to frequency and percentage distribution. The mean model is stated as follows:

$$\bar{x} = \frac{\sum a_i n_i}{\sum x_j}$$

Where:  $i$  = response category index  
 $x_j$  = the sum of  $j$  factors 1,2,3,.....N  
 $a_i$  = constant expressing the weight given to the  $i$ th response  
 $n_j$  = the variable expressing the frequency of the  $i$ th

The data collected are from the primary and secondary sources. Primary data was gathered through questionnaires while data from secondary sources such as journal materials, other published materials were used for the literature aspect of the study.

Questionnaires were administered with responses rate of 87% from the residents in the study area and a rate of 85% from the Estate Surveyors and Valuers with management properties in the study area. Responses were later coded and imputed. The analysis of data was carried out using the Statistical Package for Social Science (SPSS 17.0 for Windows), Microsoft Excel and graphic software. The gathered data are organized and quantitatively summarized in such a way that it enables one to confirm or reject whatever pre-conceived ideas one may have about the relationship between road rehabilitation and property values. The result of the analysis are presented as follows;

**4.1 Advantages of Road Rehabilitation**

Here the respondents were asked to look at the possible advantages experienced by residents as concerns the rehabilitation of Lasu-Isheri road. The questions were set to assist in knowing the positive effects on which the perception and satisfaction will be based.

**4. Data Analysis and Discussion**

**Table 1: Advantages of Road Rehabilitation (Residents)**

S/N	Advantages	Strongly Agree W=5	Agree W=4	Indifferent W=3	Disagree W=2	Strongly Disagree W=1	Total	Mean	RANK
1.	Direct employment creation	43 $a_i n_i$ 215	24 $a_i n_i$ 96	4 $a_i n_i$ 12	2 $a_i n_i$ 4	0 $a_i n_i$ 0	73 327	4.48	1 <sup>st</sup>
2.	Enhanced economic development	30 $a_i n_i$ 150	40 $a_i n_i$ 160	2 $a_i n_i$ 6	1 $a_i n_i$ 2	0 $a_i n_i$ 0	73 318	4.36	2 <sup>nd</sup>
3.	Reduced travel time	23 $a_i n_i$ 115	40 $a_i n_i$ 160	7 $a_i n_i$ 21	1 $a_i n_i$ 2	2 $a_i n_i$ 2	73 300	4.12	3 <sup>rd</sup>

4. Reduced travel cost/ transport fare	25	28	11	7	2	73	3.92	4 <sup>th</sup>
	a <sub>i</sub> n <sub>i</sub>	286						
	125	112	33	14	2	73	3.56	5 <sup>th</sup>
5. Reduced vehicle operating costs	24	32	4	11	2	73	3.56	5 <sup>th</sup>
	a <sub>i</sub> n <sub>i</sub>	260						
	96	128	12	22	2			

Table 1 shows the result of the weighted mean used to analyze the likert scale questions which helped to ascertain how strongly the respondents agree to the variables (advantages) given; the resident's opinion on the advantages of road rehabilitation. It reveals that the creation of direct employment such as road sweepers, etc. had highest response by the respondents with a Mean of 4.48; next is the enhanced economic development with a Mean of 4.36; then other advantages like the reduced travel times and reduced travel cost are with a mean of 4.12 and 3.92 respectively. The least ranked advantage is the reduced vehicle

operating cost with weighted mean of 3.56. The residents are therefore of the opinion that there have been numerous employment creation opportunities since the rehabilitation of the road.

### 4.2 Disadvantages of Road Rehabilitation

The respondents were also asked to look at the possible disadvantages experienced as regards the road rehabilitation works with the aim of identifying their opinion. This would enable the researcher know in certainty what disadvantages has more significance than the others.

Table 2: Disadvantages of Road Rehabilitation (Residents)

S/N	Disadvantages	Strongly Agree W=5	Agree W=4	Indifferent W=3	Disagree W=2	Strongly Disagree W=1	Total	Mean	RANK
1. Loss of property due to road expansion		20	20	19	10	4	73	3.33	1 <sup>st</sup>
	a <sub>i</sub> n <sub>i</sub>						243		
2. increased safety costs (traffic handling requirements and increased no of accidents)		11	18	17	21	6	73	3.09	2 <sup>nd</sup>
	a <sub>i</sub> n <sub>i</sub>						226		
3. Increased environmental costs i.e. air pollution		55	72	51	42	6	73	3.07	3 <sup>rd</sup>
	a <sub>i</sub> n <sub>i</sub>						224		
4. Increase in crime rate e.g. robbery and burglary		10	18	21	15	9	73	3.07	3 <sup>rd</sup>
	a <sub>i</sub> n <sub>i</sub>						224		
		50	72	63	30	9	73	2.97	4 <sup>th</sup>
		13	15	8	31	6			

attacks	$a_i n_i$	217				
	65	60	24	62	6	

Table 2 shows respondents opinion on the disadvantages of road rehabilitation. It is shown that the increase in crime rate e.g. robbery and burglary attacks have the lowest ranking with a mean of 2.97. Then the increased environmental costs and increased safety costs have means of 3.07 and 3.09 respectively, therefore leaving loss of property due to road expansion as the effect ranked the highest with a mean of 3.33. It is inferred from the above that the increase in crime rate was seen as the least influential while the most influential disadvantage was the loss of property due to road which implies that adequate compensation was paid to the

affected parties.

### 4.3 Challenges Faced by Residents

The respondents who were the residents in this case, were asked to give their opinion on the impacts felt by them as residents of the area before and after the road rehabilitation project. Their level of agreement was weighed on a 5-point likert scale with 1 being ‘Strongly disagree’, 2 being ‘Disagree’ 3 being ‘Indifferent’ 4 being ‘Agree’ 5 being ‘Strongly agree’. Tables 3 and 4 puts into perspective the challenges experienced by the residents of the study area before and after the road rehabilitation project.

Table 3: Challenges Faced By Residents before the Road Rehabilitation

S/N	Challenges	Strongly Agree	Agree	Indifferent	Disagree	Strongly Disagree	Total	Mean	RANK
		W=5	W=4	W=3	W=2	W=1			
1.	Loss of time due to traffic diversions.	48	21	0	0	4	73	4.49	1 <sup>st</sup>
		$a_i n_i$	$a_i n_i$	$a_i n_i$	$a_i n_i$	$a_i n_i$	328		
		240	84	0	0	4			
2.	Reduction in vehicular speeds due to port holes and bumps	35	33	0	3	2	73	4.32	2 <sup>nd</sup>
		$a_i n_i$	$a_i n_i$	$a_i n_i$	$a_i n_i$	$a_i n_i$	315		
		175	132	0	6	2			
3.	Stress to person from the need to squeeze through narrow roads, potholes, drive very slowly	30	37	3	2	1	73	4.27	3 <sup>rd</sup>
		$a_i n_i$	$a_i n_i$	$a_i n_i$	$a_i n_i$	$a_i n_i$	312		
		150	148	9	4	1			
4.	Reduction in business revenues and decrease in productivity.	25	34	3	4	7	73	3.90	4 <sup>th</sup>
		$a_i n_i$	$a_i n_i$	$a_i n_i$	$a_i n_i$	$a_i n_i$	285		
		125	136	9	8	7			
5.	Noise and air pollution from construction activities.	14	35	14	2	8	73	3.62	5 <sup>th</sup>
		$a_i n_i$	$a_i n_i$	$a_i n_i$	$a_i n_i$	$a_i n_i$	264		
		70	140	42	4	8			

From Table 3 the residents agree to loss of time due to traffic diversions as the most significant challenge faced before the road rehabilitation with a mean of 4.49; noise and air pollution from construction activities is the challenged that is least faced, and has a weighted mean of 3.62. It can be further explained that loss of time due to traffic diversions was seen as the worse challenge before the road was rehabilitated as a result of the previous

condition of the road which lead to traffic congestion during the peak periods. Also the reason noise pollution (pollution generally) was seen as the least faced is because these activities were restricted to the road.

In comparison is their opinion about the challenges faced after the road has been rehabilitated. Using the same parameters, Table 4 analyses these challenges by ranking.

Table 4: Benefits derived by Residents after the Road Rehabilitation

S/N	Benefits	Strongly Agree	Agree	Indifferent	Disagree	Strongly Disagree	Total	Mean	RANK
		W=5	W=4	W=3	W=2	W=1			
1.	Increases in business revenues and productivity.	17	10	3	33	10	73	2.88	5 <sup>th</sup>
		$a_i n_i$	$a_i n_i$	$a_i n_i$	$a_i n_i$	$a_i n_i$	210		
		85	40	9	66	10			
2.	Less noise and air pollution from construction activities.	8	3	26	22	14	73	2.58	4 <sup>th</sup>
		$a_i n_i$	$a_i n_i$	$a_i n_i$	$a_i n_i$	$a_i n_i$	188		
		40	12	78	44	14			
3.	Increase in vehicular speeds due to non-existence of port holes and bumps	9	12	2	28	22	73	2.43	3 <sup>rd</sup>
		$a_i n_i$	$a_i n_i$	$a_i n_i$	$a_i n_i$	$a_i n_i$	177		
		45	48	6	56	22			
4.	Freedom of person to drive faster through rehabilitated roads which are wider.	3	8	5	47	10	73	2.27	2 <sup>nd</sup>
		$a_i n_i$	$a_i n_i$	$a_i n_i$	$a_i n_i$	$a_i n_i$	166		
		15	32	15	94	10			
5.	Gain in time due to little or no traffic diversions.	3	3	8	35	24	73	1.99	1 <sup>st</sup>
		$a_i n_i$	$a_i n_i$	$a_i n_i$	$a_i n_i$	$a_i n_i$	145		
		15	12	24	70	24			

Table 4 reveals that increases in business revenues and productivity owing to satisfactory access to their businesses ranked the least benefit in the residents opinion with a mean of 2.88 while the huge gain in time due to little to no traffic diversions, has a mean of 1.99, hence seen as the massive benefit derived from the road

rehabilitation project. It can therefore be inferred that the challenge encountered before the rehabilitation, the reductions in business revenue and productivity are now considered a benefit as the business revenues have since then increased because of the presence of competition between businesses and also the extra time

gained while driving.

**4.4 Rental Values of Properties in Lasu-Isheri Environs**

Estate Surveyors and Valuers were asked to identify the rental values passing on different types of properties in the area between 2007 and 2013. The responses help the researcher deduce the change in rental values before and after road rehabilitation.

**Table 5: Rental values of properties in Lasu-Isheri Environs**

Table 5 shows the five different property types and their rental values before, during and after road rehabilitation works in Lasu-Isheri

between the periods of 2007 and 2013. It is however necessary to state that the road rehabilitation was carried out between 2009 and 2010, hence the time before the rehabilitation was from 2007-2008 and after the rehabilitation was from 2011-2013. Using the different linear lines in Fig 1, for the 5-bedroom detached house a 100% rent increase was obtained as a result of the road improvement works. Similarly a 120%, 150%, 130% and 220% rental increases were obtained on the 4-bedroom detached house, 3-bedroom flat, 2-bedroom flat and self-contained units respectively over the same period.

Rental Values of properties around Lasu-Isheri (before, during and after)					
Years	5-bedroom detached house (₦)	4-bedroom detached house (₦)	3-bedroom flat (₦)	2-bedroom flat (₦)	Self-contained units (₦)
2007	260,000	250,000	140,000	110,000	62,500
2008	310,000	270,000	155,000	130,000	72,500
2009	350,000	325,000	180,000	160,000	95,000
2010	400,000	425,000	220,000	180,000	120,000
2011	440,000	490,000	250,000	200,000	135,000
2012	490,000	510,000	300,000	230,000	160,000
2013	520,000	550,000	350,000	260,000	200,000
Rent value increase (₦) between 2007 and 2013	260,000	300,000	210,000	150,000	137,500
% Increase	100%	120%	150%	130%	220%
Ranking	5 <sup>th</sup>	4 <sup>th</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	1 <sup>st</sup>

From the percentage increase in rental values, it can be seen in Table 5 that the self-contained units benefited from the road rehabilitation works the most with a 220% increase in its rental value, the 3-bedroom flats came in 2<sup>nd</sup> with a

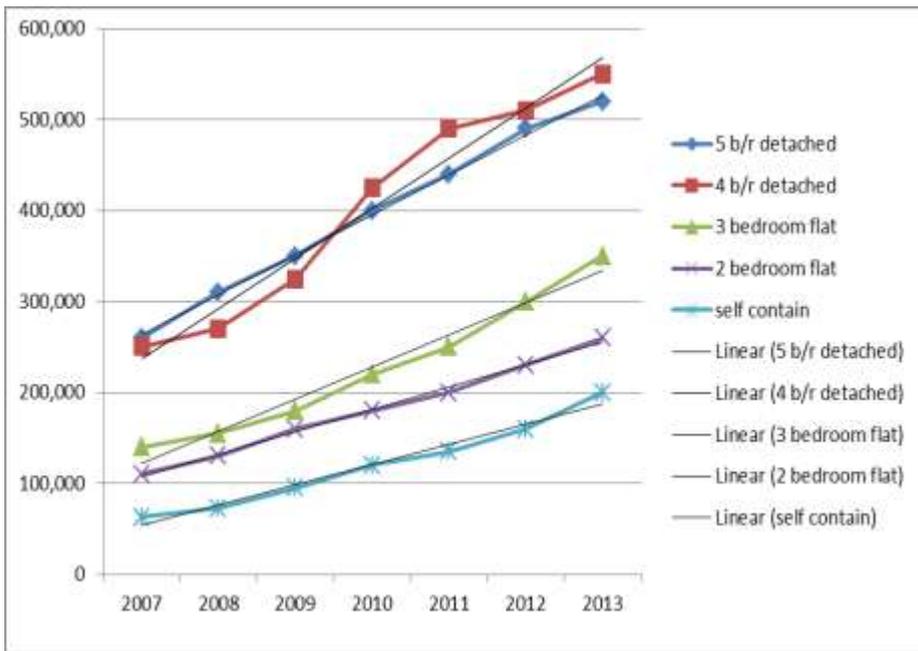
150% increase in its rental values. Similarly 2-bedroom flats, 4-bedroom detached house and the 5-bedroom detached house came in 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> respectively in the percentage increase their rental values experienced as a

result of the road rehabilitation works. The self-contained unit has the highest percentage increase because there is a high demand by residents in their use. This just goes to prove that the area is dominated by low income earners who reside in self-contained apartments and married couples building families who strive to live in comfortable 3-bedroom

flats, hence the demand for both property types are high which produced a significant increase in their rental values.

Fig 1 supports Table 5 by giving a clear graphical representation of trends in rental values of the five properties within the road rehabilitated area.

Fig 1 Graphical Representation of Rental Values of Properties on Lasu-Isheri Road



It can be seen from the graph that between the years 2009 and 2010 there is steepness to the slope showing a drastic rise in rental values during the road rehabilitation process and this rental values continue to increase till the year 2013. This can be attributed to the various benefits associated with the road rehabilitation assuming all other factors that affect rental values remains constant.

**6. Conclusion and Recommendation**

This research established the impact of road rehabilitation on property values using Lasu-Isheri road as a case study.

Results revealed that the creation of direct employment had the highest response as advantage road rehabilitation brings, also the resident’s proved that their once experienced challenge of Time loss due to road diversion became the least of their challenge after the road rehabilitation work was completed. Based on the findings, the study recommends that the Government should look into the commencement of more road rehabilitation project in different areas especially those that encounter traffic jams, portholes, bumps and have major

drainage issues. These will help to enhance the economic development of the area, increasing land and rental values and its availability and also encourage developers to invest. It is the hope of the researcher that the findings

in this study will be useful to government at different levels in policy formulation and implementation of measures that will effectively facilitate accessibility through rehabilitative measures taken on road.

## References

- Aigbe, G.O, Ogundele, F.O and Aliu, I.R (2012). Road Facility and Maintenance in Lagos State Nigeria. *British Journal of Arts and Social Sciences*, 4(2), <http://www.bjournal.co.uk/BJASS.aspx>
- Ajayi M, Ojo B, Olukolajo M and Oyetunji A. (2013). Impact of road expansion projects on the informal sector in Akure, Ondo State, Nigeria. *TSOSD-GIS and Remote Sensing, FIG Working Week 2013, Environment for Sustainability*; May 6–10; Abuja, Nigeria.
- Akee, R. (2006). "The Babeldaob Road: The Impact of Road Construction on Rural Labor Force Outcomes in the Republic of Palau." *IZA Discussion Paper 2452*.
- Alimi R.K, Ayedun C.A and Oni A.S (2014). An Appraisal of the Relationship between Road Improvements and Immediate Neighborhood Residential Properties Values in Metropolitan Lagos. *American International Journal of Contemporary Research*, 4(6); 215-222
- Al-Mumaiz M, and Evdorides H. (2017) Modeling the Impact of Road Construction on Land Value. A PhD Thesis submitted to the University of Birmingham UK. Ministry of Higher Education and Scientific Research, Iraq (MOHE)
- Huang, W. (1994). "The Effects of Transportation Infrastructure on Nearby Property Values: A Review of the Literature." *Institute of Urban and Regional Development: Berkeley, CA*.
- Hyunwoo, K., Du-Heon, L., Jai-Dong, K., Hee\_sung, P. and Ju-Goang, L. (2012). The Direct Employment Impact Analysis of Highway Construction Investments. *Journal of Civil Engineering*, 1-9.
- James M. Gatawa and M. Murungi (2015) Infrastructure Development and Real Estate Values in Meru County, Kenya. *Journal of Finance and Accounting*, 6(8), 212-221
- Lacono, M. and Lewinson, D. (2009). *The Economic Impact of Upgrading Roads*. Minneapolis: University of Minnesota.
- Mikelbank, Brian. (2001). "Spatial Analysis of the Relationship between Housing Values and Investments in Transportation Infrastructure." Paper presented at the 40th Annual Meeting of the Western Regional Science Association, Palm Springs, California (February).
- Mkalala J.; Kamara, S.; Ndong, P.; Iluboudo, J.; and Baiod, S. (2009). *Aflao-Sanvee Condji Road Rehabilitation*. Aflao-Sanvee Condji, Togo: African Development Bank Group. July
- Ogboru T. (2009) A Study of the Implication of Road Widening Activities on Property Value. A B.Sc Thesis submitted to the Department of Estate

- Management, Covenant University, Ogun State.
- Oni, A. O. (2009) Arterial Road Network and Commercial Property Values in Ikeja, Nigeria. PhD thesis, Department of Estate Management, Covenant University, Ota, Ogun State.
- Siethoff T. and Kara, K. (2002). "Property Values and Highway Expansions: An Investigation of Timing Size, Location and use Effects". Transportation Research Record No. 1812: 191-200. Paper presented at the 81<sup>st</sup> Annual meeting of the Transport Research Board, January.
- Stevenson M. (1995). Social Impact Assessment of Major Roads. Canada: 20th World Road Congress.