

## **FACTORS THAT INFLUENCE REAL ESTATE PROJECT INVESTMENT: PROFESSIONALS’ STANDPOINT**

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### **Abstract**

Studies have shown that a number of significant factors influence property value in different real estate markets around the world. These factors affect real estate stakeholders’ decisions and the economy in general. Due to the uniqueness and heterogeneous nature of the property market, this study aims at identifying and examining the significant factors that influence property value adopting Lagos, Nigeria, as a representative case. This study was carried out in two phases. First, a systematic review of studies focused on factors affecting property value in Lagos, Nigeria and other real estate around the world was conducted. Twenty factors which are peculiar to the study area were identified from the review and used to design the survey instrument. The questionnaire was administered electronically to experienced real estate professionals practicing in the Lagos metropolis property market selected from the 2014 membership directory of Nigerian Institution of Estate Surveyors and Valuers (NIESV). The professionals ranked the factors in the order of significance based on their perception. The data collected was analysed to establish the mean score of each attribute which signifies their relative importance to property value determination. Out of the 20 identified attributes, only six are highly significant to real estate investment value in the Lagos metropolis. They include location, neighbourhood characteristics, property state of repair, property size, and level of security in the neighbourhood and age of property. These highly significant attributes when accorded outmost consideration by all real estate stakeholders when embarking on property investment in the study area, will yield profit maximization.

**Keywords:** Lagos metropolis, Nigeria, Property attributes, Real estate investment, Valuers

### **1 Introduction**

The importance attached to real estate properties by different property market participants cannot be overemphasized. This is because of the contribution of real estate properties to the economy of a nation as well as the wealth of an investor (individual or corporate) and also serve as an edge against inflation. Real estate property can be held as an investment goods and as consumption (i.e. owner-occupier) (Chin and Chau, 2002). The composition of numerous unique characteristics embedded in a real estate property is responsible for the complex nature of this class of investment (Rosen, 1974; Sirmans et al., 2005). To buttress this, Tse and Love (2000), Mbachu and Lenono (2005), Selim (2008), amongst others have conducted studies in different real estate markets and found that the value of a real estate property is determined by a bundle of independent variables and this complexity affects the value attached to each variable by different stakeholders.

Since the products of the construction industry is largely consumed by the real estate sector (Mbachu, 2003), consequently, assessing the factors that affect this class of investment from the viewpoint of real estate professionals that are knowledgeable about the homebuyers' demand (taste and preference) is appropriate. Therefore, the intuitive knowledge of the property market of an experienced real estate valuer should not be ignored in real estate related investments (Aluko, 2007). In other words, valuers' judgement on the significance of the property characteristics is noteworthy and all stakeholders (existing and stakeholders) should consider this when making real estate investments decisions.

Studies (Ajide and Kareem, 2010; Aluko, 2011; Babawale et al., 2012; Famuyiwa and Babawale, 2014) carried out in Lagos, Nigeria, posited that the attributes that determines the value of a real estate property can be estimated using the 'scientific' approach, whereas, the process of property valuation involves both 'art' and 'science' (Azmi et al., 2013). Besides, the results of these studies may be untenable when a critical event occurs (Rosenhead, 1989), for instance, the global economic meltdown. Hence, a different approach is being adopted in this study, which aims to evaluate valuers' judgement on the significance and importance of property attributes that influence the value attached to real estate property investments in the Lagos metropolis.

This study concurrently identifies from literature and evaluates the variables that influence real estate investment project in Nigeria's megacity. The findings of this current research will be useful to all built environment professionals, academics as well as real estate investors, it will provide an overview of the most significant factors that should be considered when investing in the Lagos metropolis. The next section of this paper presents an overview of property value determinants followed by the presentation of the methodology adopted for the research. The following section presents the results and discussion, while the conclusion and further research is presented in last section.

## **2 Property Value Determinants – Review of Literature**

Different studies have been conducted by scholars in real estate markets around the world to establish the peculiar attributes that influence real estate investments in their property markets. The need for market specific studies could be attributed to the differences in the cultural, legal, financial and economic setting of each country (Olayiwola et al., 2005), which makes the value of real estate investment to be influenced by location, location, location (Li et al., 2011).

In order to develop a comprehensive list of attributes that influence real estate property investments in the Lagos metropolis, the determinants of property value in the Lagos metropolis were identified from published articles retrieved from online databases and search engines and were reviewed. A total of 20 independent attributes were found to be significant in the studies retrieved for review (see Table 1). Table 1 shows that the 'availability of neighbourhood security' is a reoccurring theme in six out of the seven studies focused on the Lagos metropolis property market. It is reasonable to suggest that this variable is the most significant factor determining property value in the Lagos metropolis. Further, a review of similar studies carried out in other real estate markets was conducted in order to identify a comprehensive list of attributes that influence property values from the literature and to compare with the situation in the Lagos metropolis.

**Table 1. Lagos metropolis studies**

Property attributes	Olayiwola et al. (2005)	Bello and Bello (2007)	Ajide and Kareem (2010)	Babawale and Johnson (2012)	Babawale et al. (2012)	Oloke et al. (2013)	Famuyiwa and Babawale (2014)
<b>Location</b>		✓					
<b>Accessibility to place of work</b>	✓	✓	✓				
<b>Accessibility to CBD</b>	✓						
<b>Accessibility to public transport facility</b>	✓		✓				
<b>Proximity to highway</b>						✓	
<b>Accessibility to School</b>				✓			
<b>Accessibility to shopping mall</b>				✓			
<b>Neighbourhood characteristics</b>	✓					✓	
<b>Availability of neighbourhood security</b>		✓	✓	✓	✓	✓	✓
<b>Availability of electricity</b>		✓					✓
<b>Availability of pipe borne water supply</b>			✓		✓		
<b>Availability of waste disposal system</b>			✓				✓
<b>State of repair of the property</b>		✓					
<b>Size of property</b>				✓			
<b>Age of the property</b>		✓					
<b>Numbers of bedrooms</b>				✓	✓	✓	
<b>Number of bathrooms/toilets</b>			✓	✓	✓		
<b>Building characteristics</b>				✓			
<b>Availability of security fence</b>					✓		
<b>Size of bedroom</b>					✓	✓	

From Table 2 it can be seen that the most significant factor that influences property value in other real estate markets is property size. It occurred seven out of the nine studies which depicts that home seekers in these markets place more emphasis on the size of a property, when making real estate property decision. A comparison of the Lagos property market studies with these of other real estate markets reveal that property attributes influencing value are location- specific, which necessitates the need for market segmented studies.

**Table 2. International studies**

Property attributes	Mbachu and Lenono (2005)	Choy et al. (2007)	Ge and Du (2007)	Selim (2008)	Zietz et al. (2008)	Pozo (2009)	Anim-Odame et al. (2009)	Sanjari (2012)	Baltagi et al. (2015)
Location	✓		✓			✓	✓		
Accessibility to place of work									
Accessibility to CBD								✓	
Accessibility to public transport facility	✓	✓							
Proximity to highway									
Accessibility to School									
Accessibility to shopping mall									
Neighborhood characteristics									
Availability of neighborhood security	✓								
Availability of electricity									
Availability of pipe borne water supply				✓					
Availability of waste disposal system	✓								
State of repair of the property									
Size of property		✓	✓	✓	✓	✓	✓	✓	
Age of the property									
Numbers of bedrooms	✓		✓	✓			✓		
Number of bathrooms/toilets					✓	✓			✓
Building characteristics	✓			✓	✓				✓
Availability of security fence	✓								

### 3 Research Methodology

In literature, quantitative modelling technique has been used to assess the effect of property attributes on property value (Murie, 1998). However, survey research approach was adopted in this study. The need to collect data on the perception of real estate professionals (a large study population) on the attributes that influence property value in the Lagos metropolis (a large study area) makes survey research approach well suited for this study. This is corroborated by the assertions that can be found in Easterbrook et al. (2008). It is argued that the preference of this research approach in built environment disciplines can be linked to the need for generalization, hypothesis testing and comparative analysis (Laryea and Leiringer, 2012; Phua, 2013).

The Lagos metropolis was chosen as the study area for this research. Lagos has been adjudged as a megacity by the United Nations due to large population and the volume of commercial activities that takes place in the city of Lagos (Lagos State Government, 2015). In addition, a

large majority of multinational companies operating in Nigeria have their head-offices located within Lagos (Babawale and Oyalowo, 2011) and the city is the most vibrant real estate market in Nigeria (Oni, 2010). Ibiyemi and Tella (2013) points out that over 50% of registered real estate professionals and firms are practicing and domiciled in Lagos; therefore, it is reasonable to suggest that Lagos metropolis is a justified choice.

In consonance with suggestions put forward in Murie (1998), it was recommended that for housing studies, retrieving information from real estate professionals is important. Hence, the respondents of this study are professional members of the Nigerian Institution of Estate Surveyors and Valuers (NIESV). NIESV is empowered by Decree No. 24 of 1975 of The Laws of the Federal Republic of Nigeria, to regulate real estate professionals in Nigeria. Being a professional member of NIESV means that such a person has acquired the minimum academic qualification, experience and professional expertise to practice as a real estate professional. Out of the 1794 registered members in the 2014 NIESV membership directory, a stratified random sample of 150 valuers practicing in Lagos metropolis who had email addresses in the directory were selected for the study. This is in line with suggested sample sizes in similar previous studies (See for instance Kauko (2007); Adewunmi and Olaleye (2011); Ameyaw and Chan (2015)).

The list of attributes generated and presented in Table 1 was used to design an online questionnaire which was administered on the respondents. The first section of the questionnaire focuses on the demographic details of the respondents while the second section consist the attributes which the respondents were asked to rank in the order of importance on a five-point Likert scale. The scale adopted is from 1 - 5 representing highly insignificant - highly significant, respectively.

The electronic questionnaire was sent to the valuers and they were expected to respond within two months. An additional one month extension was granted at the expiration of the initial two months and this was done to increase the response rate. At the end of the survey period, an effective response rate of 35% was recorded. This is above the common margin of 20-30% obtainable in the similar studies (Akintoye and Fitzgerald, 2000).

The mean scores (MS) was adopted in ranking the attributes in order to establish their level of significance, due to its appropriateness for studies of this nature (Adair et al., 1996). The MS was estimated using the formula in Equation (1). However, in an attempt to categorise the Relative Importance of the attributes, the following criteria was adopted:

Highly significant = MS of 4.00 and above, Significant = MS of between 3.50 and 3.99 Slightly significant = MS of between 3.00 and 3.49 and Insignificant = MS of less than 3.00

$$MS = \frac{5n_5 + 4n_4 + 3n_3 + 2n_2 + 1n_1}{N} \quad (1)$$

Where  $n$  is the score given by valuers based on a five-point scale of 1 to 5 and  $N$  is the number of valuers that rated an attribute.

In order to confirm the reliability of the data collected, the Cronbach's alpha test was conducted to establish the internal consistency of the responses. Oyedele (2013) posit that the Cronbach alpha if item/attribute deleted means that the deletion of such item will result to an improved reliability of the data. This was conducted to measure the effective contribution of each attribute to the overall data.

#### 4 Analysis and Results

Results from the data analysis revealed that 67% of the professionals have acquired at least Bachelor of Science degree, 33% have obtained Higher National Diploma, while none possess neither High School Certificate nor a Doctor of Philosophy degree. At the same time, 44% of

the valuers have working experience ranging between 6-10years, 33% have 0-5 years of industry experience, 17% have experience of between 11 and 15 years, in addition, 6% have 15 years and above years of experience. The characteristics of the respondents suggest that they are well informed and conversant with the real estate industry.

The Cronbach's alpha value of 0.843 was recorded for all the attributes which shows a high level of internal consistency that is above the minimum acceptable value of 0.70 as posited by Hair et al. (2010). The Cronbach's alpha if item is deleted for the attributes ranges between 0.822 (size of bedroom and accessibility to place of work) and 0.841 (state of repair of property), all these values are less than that of the overall Cronbach's alpha value (0.843). This connotes a significant contribution of all the attributes to the internal reliability of the data and they were therefore, all retained for the analysis.

**Table 3. Ranking of property value determinants**

Factors	Mean Score	Overall ranking	Criticality
Location	4.92	1	H. significant
Neighborhood characteristics	4.31	2	H. significant
State of repair of the property	4.23	3	H. significant
Availability of neighborhood security	4.06	4	H. significant
Size of property	4.06	4	H. significant
Age of the property	4.00	5	H. significant
Numbers of bedrooms	3.98	6	Significant
Number of bathrooms/toilets	3.90	7	Significant
Availability of electricity	3.81	8	Significant
Accessibility to place of work	3.79	9	Significant
Accessibility to CBD	3.75	10	Significant
Building characteristics	3.75	10	Significant
Availability of security fence	3.73	11	Significant
Availability of pipe borne water supply	3.65	12	Significant
Accessibility to public transport facility	3.62	13	Significant
Size of bedrooms	3.60	14	Significant
Proximity to highway	3.56	15	Significant
Availability of waste disposal system	3.38	16	S. significant
Accessibility to School	3.15	17	S. significant
Accessibility to shopping mall	3.13	18	S. significant

Note: H. significant is highly significant and S. significant is slightly significant.

Information in Table 3 shows that the MS of the attributes ranges between 4.92 and 3.13, that is for property location and accessibility to shopping mall, respectively. Based on the evaluation indices set earlier, out of the 20 attributes, six are highly significant to real estate property investment in the Lagos metropolis, 11 are significant, three are slightly significant, while none of the attribute is insignificant.

## 5 Discussion

Location as a property attribute has been widely examined in real estate research. Property location has been proven to significantly influence property value in different real estate markets around the world as reported by McCluskey et al. (2000), Kauko (2003), Ge and Du (2007), amongst others. This variable was ranked as most highly significant in the Lagos metropolis, which conforms to existing literature, suggesting that homebuyers will consider the location a property when making residential decisions.

The second highly significant variable in this study is neighbourhood characteristics. Which suggest that homebuyers in the metropolis consider the characteristics of a neighbourhood when making real estate decisions. This was established in the studies of Han et al. (2002), Kauko (2003) that homebuyers are willing to pay a premium for a property situated in a neighbourhood characterised with pleasant features. This conforms to the study of Iroham et al. (2014) that found that neighbourhoods that are characterised with modern buildings designs, good roads, ocean view, building constructed with modern building materials commands higher property value.

Gallimore et al. (1996), Clark and Herrin (2000), Amenyah and Fletcher (2013) reported that homebuyers prefer to buy or rent a property located in a safe neighbourhood. Indicating that security of lives and properties is paramount to real estate consumers. This is the same case in the Lagos metropolis as reported in Table 3, where neighbourhood security is ranked as highly significant determinant of property value.

The state of repair of a property which defines the finishes and aesthetics of a property is also ranked amongst the highly significant attributes in this study. As documented by Mbachu and Lenono (2005) that the state of repairs of a property in terms of finishes, beauty, design, etc. is a significant real estate property value determinant. This means that a real estate property in a good state of repairs, will command a higher value when compared to these in a bad state of repair.

Homebuyers belong to different socio-economic and cultural class. Their income, needs and taste may influence the amount they may be willing to pay for a property. On the other side, the bigger the size a of property, the higher the construction cost, which will be reflected in the property value (Ge and Du, 2007). This is also the position of Owusu-Ansah (2012) that argued that the bigger the size of a property, the higher the value of such property. The review conducted by **Sirmans et al. (2005)** also revealed that property size significantly influenced property value in 42 out of the 52 occurrences of the attributes in studies. This is the case in the Lagos metropolis as discovered in this study. The attribute has a MS of 4.06 which makes it highly significant to real estate property value formation.

As documented by Chin and Chau (2002), the age of a property has a significant influence on its value, but this relationship is negative. Meaning that as the age of a property increases, so will the value of the subject property be decreasing. The explanation for this is that as a property gets older, the components begin to wear and tear and there may be need for some level of refurbishment, renovation or repairs and all these comes at a cost which may not be associated with similar new property. Therefore, a rational homebuyer will be willing to pay the added premium on the value of a newer building than an old one. This is evident in the Lagos metropolis property market as the attribute was ranked highly significant to property value, as this is also the case in other real estate markets (Choy et al., 2007); Tse, 2002).

## 6 Conclusion and Further Research

Due to the complexity of the real estate markets and especially that of a megacity, this research was embarked on to establish the critical determinants of real estate property value, which in turn affects real estate investments in the Lagos metropolis, Nigeria. A review of the literature

was conducted in order to develop a comprehensive list of real estate property value determinants in the Lagos metropolis and in other real estate markets around the world. A questionnaire was designed by utilizing these twenty retrieved attributes. The questionnaire was administered on experienced real estate professionals practicing in the study area for them to rank these attributes according to their level of importance and significance. It was found that six out of the twenty attributes significantly influence real estate property value in the Lagos metropolis real estate market and in their order of importance they include property location, neighbourhood characteristics, state of repair of the property, availability of neighbourhood security, size of property, and age of property. Although none of the attribute was ranked as insignificant, the remaining variables were either found to be significant or slightly significant. The goal of every real estate investors and built environment professionals acting as property investment advisors is to maximize profit, therefore, these highly significant attributes should be considered as important criteria when making investment decisions in the real estate sector in Lagos, Nigeria. The findings of this study will ensure that real estate property is developed in such a way that it will meet the taste and preference of the targeted real estate consumers, which will consequently result in profit optimization.

This survey focused on the Lagos metropolis property market, however, a country-wide survey will provide a broad overview of the determinants of real estate property value in other cities in Nigeria. This will be useful to existing and prospective real estate investor as it will show what homebuyers in different real estate markets prefer and are willing to pay for.

It is of essence to indicate at this point that this research is a pilot study to a bigger research targeted at modeling the Lagos metropolis real estate market. The list of property value attributes generated in this study are peculiar to the study area and will be employed as the explanatory variables for the development of artificial intelligence models for the Lagos metropolis property market. Artificial intelligence modeling techniques that have proven to be reliable and accurate for property value modeling, have received much attention in other real estate markets but have not in the Nigerian real estate research domain, will be experimented in the metropolis.

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