Exploring Spatial Pattern of Residential Property Value around Cultural Heritage Sites in Ile-Ife, Nigeria

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Abstract

Cities in both developed and developing economies are characterised by various cultural heritage sites. Such sites can impact the value of residential properties around them either positively or negatively. In view of this, this study explores the spatial pattern of residential property values around cultural heritage sites in Ile-Ife, Nigeria. One (1) cultural heritage site each was purposively selected in the core and sub-urban areas of Ile-Ife. Furthermore, systematic sampling technique was used to select one of every twenty (20) buildings within different radii (1-300, 301-600 and 601-900 meters) of the selected cultural heritage sites. A total of two hundred and twenty-three (223) buildings were selected. Hence, 223 questionnaires were administered on the residents of the buildings. Interview was also conducted on ten (10) real estate practitioners in the study area to optimally provide answers rental values of residential properties around the cultural heritage sites. The extracted data were analysed using multiple regression and rent differential technique. Findings showed that as distance increases from the cultural heritage sites, the average rental value of residential properties was also on the increase in the core and sub-urban areas of Ile-Ife. It was therefore established that there exists a positive relationship between the distance from cultural heritage sites and rental values of residential properties. The study further revealed that cultural heritage sites had a negative impact on the rental values of proximate residential properties in the study area. The study however concluded that the rental values of residential properties reflect distance to cultural heritage sites. It is recommended that property investors should give adequate attention to location to make accurate and dependable decisions on the supply of residential properties, especially in cities where there are cultural heritage sites.

Keywords: Cultural heritage sites, developing economy, Ile-Ife, rental value, residential properties

∎1.0 INTRODUCTION

The peculiarity of real estate property among other assets requires special attention and thorough scrutiny when determining its value. As opined by Adegoke (2014), there is a need to attach importance to diverse factors when determining real estate value to ensure accuracy. To this end, various studies conducted in both developed and developing economies have determined the effect of different factors on real estate value. These include those on infrastructure (Ajibola et al., 2013; Jung et al., 2016; McNeill & Dollery, 1999), historical designation (Coulson & Lahr, 2005; Coulson & Leichenko, 2004; Ijla, 2008; Shipley, 2000; Warren et al., 2017) and proximity to green space (Voicu & Been, 2008). Others concentrated on land use externalities (Adebayo & Oni, 2011; Aliyu et al., 2015; Babawale et al., 2012; Clark, 2006; Gambo, 2012; Nwosu & Olofa, 2015) and housing conditions (Ankeli et al., 2015). Recently, studies examining the effect of cultural heritage site on real estate property value are evolving. Cultural heritage site is an integral part of land uses in cities which can influence the value of various adjoining properties (Coulson & Leichenko, 2001; 2004; Leichenko et al., 2000; Mason, 2005).

Cities in both developed and developing economies are characterized by various cultural heritage sites that have linkage with the culture of the natives. Irrespective of the level of civilization, cities still hold distinct features of the past including cultural heritage sites, which exhibit their traditions and cultural values (Osasona, 2015; Youth Justice Board, 2008). Generally, cultural heritage sites can be preserved for either economic or non-economic reasons. The economic reasons may include income generated from the cultural heritage sites and improved local economy while the non-economic reasons could be in form of prestige, popularity, exhibition of cultural belief and cultural identity promotion to mention but few (Ayangbile & Abiodun, 2013; Coulson & Leichenko, 2004; Mason, 2005; Omisore, 2016; Schaeffer & Millerick, 1991). The corollary of the foregoing implies that the values enjoy from cultural heritage sites has informed their conservation in various cities irrespective of their effects on surrounding properties as well as the property market generally. It therefore becomes imperative for researchers to document the effects of these cultural heritage sites on the value of surrounding properties.

A number of studies have focused on cultural heritages and their influence on property value in developed economies (Armitage & Irons, 2005; Franco & Macdonald, 2016; Lazrak et al., 2014; Moro et al., 2013). However, the effect of cultural heritages on the value of surrounding properties may vary from one country to another, and even between developed and developing countries. Moreover, the types of cultural heritages in developed economies may be different from those available in Nigeria and other developing economies. On the Nigerian scene, some studies (Adegoke & Adebara, 2019; Oyedeji, 2018) have investigated the impact of cultural heritages on property value. Yet, much is still unknown about the spatial pattern of the effects of cultural heritage sites on rental value of residential properties. This study therefore explores the interplay between cultural heritage sites and the rental value of residential properties in Ile-Ife, a typical traditional city in Osun State, Nigeria. To achieve the aim of this study, the following questions are pertinent: what are the rental values of residential properties in the study area? Is there a relationship between the cultural heritage sites and rental value of residential properties in the study area? What is the impact of cultural heritage sites on surrounding residential properties in the study area? Information from the findings of this study would inform property investors about the relationship between cultural heritage sites and residential property value in Nigeria and other developing countries with similar socio-economic and cultural characteristics. Such information will be useful to property investors to make accurate and dependable decisions on the supply of residential properties with conscious consideration of location.

■2.0 LITERATURE REVIEW

In order to adequately understand the general focus of this study, it is important to provide an understanding of the term 'cultural heritage' and 'cultural heritage sites'. It is also expedient to document the determinants of property value by previous researchers before delving into relevant literature to the scope of this study.

2.1 Cultural Heritage and Cultural Heritage Sites

In the view of United Nations Educational Scientific and Cultural Organisation (UNESCO) (1972) and International Valuation Standards Committee (IVSC) (2006), cultural heritages are monuments, buildings or group of buildings as well as sites that can be linked with culture, art or science which portrays as global and outstanding value. It could be a work of man or nature. Even more so, Osasona et al. (2009) posited that cultural heritages are landmarks that show the identity of an ancient city. In the same vein, Lawanson and Adejumo (2012) opined that cultural heritages are city's point of reference, identities and touch stones which are inspirational and irreplaceable. Furthermore, Dümcke and Gnedovsky (2013) cultural heritages are resources that are identified as a reflection of expression of values, culture, belief, tradition and knowledge. The author furthered that the cultural heritages can include, built heritage, movable heritage, historical landscapes, archeological heritage, natural heritage, contemporary or recent heritage, institutional heritage and intangible heritage. In line with the aforementioned, cultural heritages include both tangible goods (historic building, archaeological site and work of art) and intangible goods (indigenous traditions and cultural landscape) (Yung et al., 2013). Cultural heritages are identities, images and symbols that express the history of a city (Gbadegesin & Osaghale, 2014). In view of the foregoing, cultural heritages are unique identities of cities that display history, culture and tradition of such cities.

Cultural heritage site can be referred to as an area, works of man, works of nature or the combination of the work of man and nature that displays an outstanding value from the point of view of ethnology, history, aesthetics and anthropology (United Nations Educational Scientific and Cultural Organisation (UNESCO), 1972; International Valuation Standards Committee (IVSC), 2006). Furthermore, Chandani et al. (2018) described heritage site in terms of the value it holds which include religious value, historical value, aesthetic value and architectural value. A recent study of Lawanson and Adejumo (2012) further posited that heritage sites are areas known for either natural beauty, historical, archeological, historical, cultural and artistic characteristics created by man, nature or both man and nature. In the light of the above, cultural heritage sites are landmarks in a city that display history, culture and tradition of such cities.

2.2 Determinants of Property Value

In real estate market, property value can be determined by various factors. These varying factors have made property value different from one market to another. For instance, Thorncroft (1965) identified three major factors as it affects residential property values which are: location; position in terms of intrinsic characteristics, and physical characteristics of the property. Also, Chin and Chau (2002) established that the characteristics of the property location, structure and neighbourhood determine property value. This submission was in line with studies such as Wong et al. (2002), Bello and Moruf (2010), Babawale et al. (2012), Oloke et al. (2013), Abidoye and Chan (2016). Furthermore, Nicholls (2002) submitted that factors determining property value are locational factors, structural factors, neighbourhood factor, community characteristics, environmental factors and time-related factors.

More so, Mbachu and Lenono (2005) opined that location factors, macro- and micro-economic factors, legislative/statutory control factors, demographic/socio-cultural, building characteristics, urban regeneration influences and market conditions are the seven major factors that affect property market value. Similarly, the study of Choy et al. (2007) established that property value can be determined by inherent property factors, neighbourhood characteristics, accessibility to facilities and environmental quality. In addition to neighbourhood, locational and structural characteristics, plentiful commentators (e.g. Adegoke & Adebara, 2019; Armitage & Irons, 2005; Franco & Macdonald, 2016; Lazrak et al., 2014; Moro et al., 2013; Oyedeji, 2018) have established that the presence of cultural heritage and the distances from cultural heritage sites can influence the value of property. In summary, the factors determining property value can be categorised under three (3) broad factors; first the physical attributes of the property, the location of the property and the characteristics of the neighborhood where the property is located.

2.3 Cultural Heritage Site and Residential Property Value

Armitage and Irons (2005) focused on the impact of listed heritages in Queensland, Australia on property value. The study was carried out theoretically. Important variables determining property value such as geographical characteristics, building types and other variables such as economic features and building designs were pinpointed. The studies reviewed did not take into consideration the nature and measurement of property value. However, the finding of the study can be of importance when carrying out deeper analysis of similar study since it was drawn from reviews of previous studies. This current study was carried out empirically.

Lazrak et al. (2014) investigated the effect of cultural heritage (listed properties and historic cultural sites) on real estate value in Dutch. Spatial autoregressive model was adopted to achieve the aim of the study. The study determined the impact of a listed building on its price in the market, investigated implication with respect to value that listed heritage has on proximate properties and estimated the impact of cultural sites on the prices of real estate. It was found that the price of a listed building increased by 26.9% while proximate houses increased in value by 0.28%. Furthermore, real estate properties around conservation areas gained additional 26.4%. The study concluded that the effect of cultural heritage on property value is dependent on the type it is. Although this study achieved its aim yet cultural heritage site like that of an ancient traditional city as not investigated in the study. This is the focus of the current study.

Moro et al. (2013) examined if the prices of properties reflect the presence of cultural heritage in Dublin. The study examined various types of heritages i.e. historical buildings, memorials and archeological sites among others. The method of analysis was hedonic pricing model which used varying distance approach of 250, 500 and 1000 meters to examine the impact of historical heritages on property value. The study found that historical buildings, towers and memorials had positive impact on property price while archeological sites had negative impact. The study although similar to the current study was carried out in developed economy rather than a traditional city like Ile-Ife. Furthermore, the current study focused on a single type of cultural heritage in different residential areas. Also the distance covered in checking the impact of the cultural heritage site on the rental value of residential properties differs.

Franco and Macdonald (2016) determined the effect of cultural heritage on residential property value in Lisbon, Portugal. The study examined various heritage amenities such as churches, air ports, palace, architectural stones among others in the study area. Hedonic model was used to determine the effect of these amenities on residential property value. The study found that the effect of the historic amenities or landmarks on residential property value is dependent on their types. Apart from the fact that the study examined multiple cultural heritages, the impact of the cultural heritage site on the rental value of residential properties was not examined spatially.

The study of Oyedeji (2018) developed a model for predicting rental values of residential properties proximate to historical site. The historical site examined was Osun-Osogbo groove, in Nigeria. The study focused on residential properties at 200 and 800 meters from the historical site. Data of previous letting in the selected areas was collected for the study. Also physical characteristics of the residential properties were investigated. Artificial Neural Network (ANN), Logistic Regression and Support Vector Machine (SVM) were used to classify the rental values of the residential properties. Other factors considered in the study were the age of properties, distance to historical site, physical characteristics of buildings among others. The study found that as rental value increased, the number of residential properties in the categories reduced. The study further established that the influence of historical sites on rental value was negative. The coverage of this study was to develop a predictive model and classify residential properties with respect to their rental values. Having achieved its objectives, the model was developed using a single cultural heritage site. The current study examined the impact of cultural heritage sites on rental values of residential properties in different residential zones of Ile-Ife.

More recently, Adegoke and Adebara (2019) explored the effect of historical preservation on the value of residential properties in Ile-Ife. Using multiple regression, the study estimated the relationship between cultural heritage sites and residential rental value at distances 300, 600 and 900 meters from the cultural heritage sites. The study found that as distance increases from the cultural heritage sites, the impact it had on rental value of residential properties reduced. The study did not examine the impact of cultural heritage sites on rental value of residential properties with respect to the residential zones. Also the impact was not determined on rent differential. The current study seeks to document these gaps.

As shown from the reviewed literature, there were only few studies conducted in developing economies. Majority of the studies were carried out in developed economies. More so, various forms of historical heritages were considered by most of the authors with less critical examination of each of the heritages. It should be noted that concentrating views on the relationship between cultural heritage sites and rental value of residential properties in selected few countries limits the broad view of findings. That is, focusing exclusively on the impacts of cultural heritage sites on rental values of residential properties in developed countries leads to a narrow-minded perspective. Furthermore, it is expedient to look at the impact of cultural heritage site on rental value of residential properties with respect to the location of the sites (different residential zones) and in terms of rent differential (difference between actual and expected rental values). Hence, the conclusions from the previous studies cannot be taken as general especially for cities in Nigeria and other developing economies where preserved cultural heritages are evident. This study therefore examined the spatial pattern of residential rental values of properties around cultural heritage sites in the core and sub-urban residential areas of Ile-Ife.

■**3.0 STUDY AREA**

Nigeria is a country located in West Africa. With over 200 million people, the nation is the most populated Black Country in the world. Nigeria is extremely diverse, with more than 250 ethnic groups and diverse cultural heritages. The capital, Abuja, is located within an area known as the Federal Capital Territory (FCT). At present, there are 36 states in Nigeria (see Figure 1). This study is carried out in Osun State (see Figure 1).
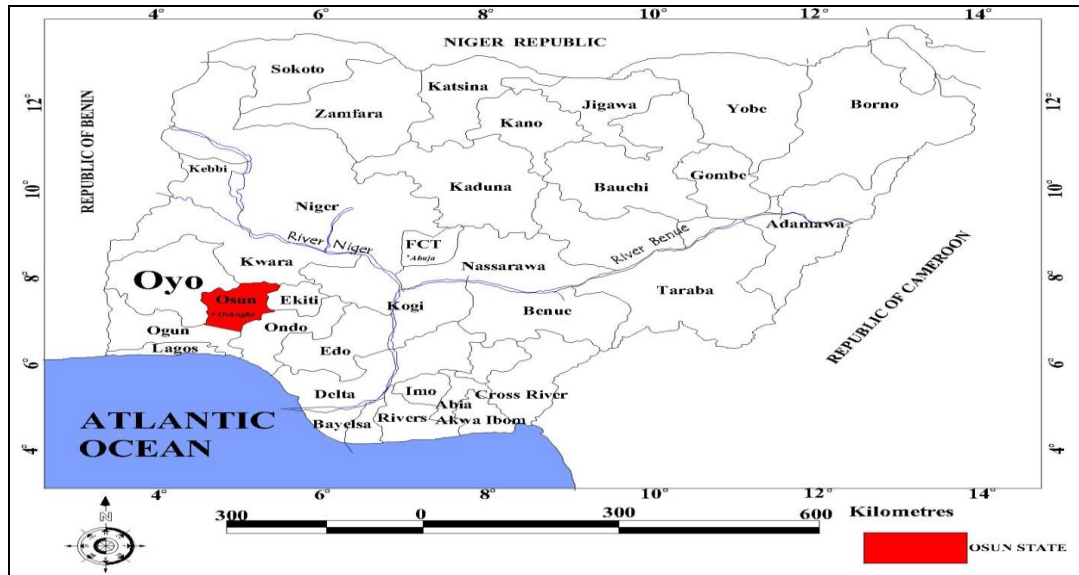
Figure 1 Map of Nigeria showing Osun State
(Source: Osun State Ministry of Lands, Housing and Survey, Osogbo)

Osun State was carved out of the old Oyo State in 1991. It is bounded in the North by Kwara State, in the East partly by Ekiti State and partly by Ondo State, in the South by Ogun State and in the West by Oyo State (see Figure 1). The inhabitants are mainly Yoruba; composed of sub-ethnic groups of the Ifes, the Oyos, the Ijesas and the Igbominas. Osun State is regarded as the ancestral home of all Yorubas given the location of Ile-Ife, the cradle and Holy City of the Yorubas. The monarchy in Ile-Ife is also one of the few ancient monarchies in the world. From as early as the 12th century, the artisans from Ile-Ife crafted fine, naturalistic cast bronze and terracotta heads that are world-renowned for their beauty. In spite of the introduction of Christianity and Islam in Osun like in other states in Nigeria, the residents of Ile-Ife are still deeply rooted in the worship of deities at the neighbourhood and house level (Afon & Adebara, 2020).

Ile-Ife is known to be characterized by diverse cultural heritage sites (Ayangbile & Abiodun, 2013; Omisore, 2016). As documented by Omisore et al. (2009) and Ayangbile and Abiodun (2013), the preserved heritages in Ile-Ife include Ile-Nla (Old Palace), Enuwa Square, Oranfe Shrine, Oduduwa Grove, Oranmiyan Grove, Osara Shrine, National Museum, Orumila Shrine, Moremi Shrine and Olokun Shrine to mention but few. Most of these heritages were found in the core area of Ile-Ife except for few that were located in the sub-urban of Ile-Ife such as Oranfe Shrine. These cultural heritages will have impact on the values of residential properties in the residential areas where they exist. Also, the drastic growth in the population of Ile-Ife as established by National Population Commission (2015) has increased the demand for residential properties in the different residential areas of traditional city. It is therefore important to examine the relationship between residential rental value and cultural heritage sites in Ile-Ife.

■4.0 METHODOLOGY

From the purpose of this study, one (1) site was purposively selected in each of the core and sub-urban residential zones of Ile-Ife. This was because most of the cultural heritage sites in Ile-Ife are situated in the core area while only Oranfe Shrine is located in the sub-urban area of the traditional city. Hence for representativeness, Oduduwa Groove and Oranfe Shrine were selected respectively from the core and the sub-urban areas of Ile-Ife (see Figures 2 and 3). Following this selection, three (3) major distances i.e. 1-300, 301-600 and 601-900 meters were marked from the selected heritages in line with the previous research (Moro et al., 2013). This was to establish the spatial pattern of the relationship between the cultural heritage sites and rental values of residential properties.

Figure 2 A map showing a section of the core residential area of Ile-Ife and Oduduwa Sacred Grove

Figure 3 A map showing a section of the sub-urban area of Ile-Ife and Oranfe Shrine

Information obtained through reconnaissance survey and Google Map showed that there were 1027, 984 and 811 residential buildings around Oduduwa Groove at radius of 1-300, 301-600 and 601-900 metres respectively. More so, evidences from the same sources showed that residential buildings around Oranfe Shrine were 532, 603 and 480 respectively at radius of 1-300, 301-600 and 601-900 metres. The first building was picked from each of the marked distances at random. Following this, systematic sampling technique was used to select one of every twenty (20) residential buildings. From this technique, 141 and 82 buildings were selected around Oduduwa Grove and Oranfe Shrine respectively. In total, 223 residential buildings were selected.

Questionnaire was administered on the household representative person in each of the selected buildings. Information sourced from the respondents included physical characteristics of the buildings, status of historical preservation and characteristics of the neighborhood where the building was situated. Furthermore, interviews were conducted with ten (10) real estate practitioners in Ile-Ife to extract

information on the expected rental values for residential properties in the core and sub-urban areas where the cultural heritage sites are situated. Other information needed for the study was extracted through physical observations such as the estimate of distances of each residential property from the cultural heritage sites.

The information collected from the residents and real estate practitioners were analysed using IBM SPSS Statistics 20. Specifically, the socio-economic characteristics of the residents, actual and expected rental values and types of residential properties were analysed using descriptive statistics such as frequencies and cross-tabulation. The respondents were also asked to rank the level of availability of various physical features such as baths and toilets, bedrooms and central air-conditioning among others in their buildings as well as availability of various neighborhood characteristics such as proximity to schools, hospitals and Central Business District (CBD) and the status of the cultural heritage sites. Score from 1 to 5 was assigned to each of the variables on a five-point Likert scale; where 5, 4, 3, 2 and 1 respectively stand for *highly available* (≥ 4.21 and ≤ 5.00), *available* (≥ 3.41 and ≤ 4.20), *undecided* (≥ 2.61 and ≤ 3.40), *unavailable* (≥ 1.81 and ≤ 2.60) and *highly unavailable* (≥ 1.00 and ≤ 1.80). In the same vein, the distances of each residential property from the cultural heritage sites were also collected.

For analysis of the internal reliability of the items in the questionnaire, Cronbach's alpha values were tested with a cut-off value of 0.70 (Tavakol & Dennick, 2011). To determine the spatial pattern of residential rental value around cultural heritage site, multiple regression was adopted. Although previous studies adopted autoregressive model, hedonic pricing model, multiple regression model and artificial neural networking (ANN) among others, Rosen (1974) and Mason (2005) established the importance of multiple regression in estimating the relationship between value and different property characteristics. Hence, a multiple regression model was developed as follow:

Rental Value (RV) = f {*physical characteristics of the building* (P), *neighborhood characteristics* (N), *status of cultural heritage site* (S), *distance from cultural heritage site* (D)}.

This is expressed mathematically as: $RV = c + \beta_1 P_1 + \beta_2 N_2 + \beta_3 S_3 + \beta_4 D_4 \varepsilon$ ………………………………………………………. *(1)*

Where: c = constant, β_{1-4} = coefficient of the variable and ε = error term.

The data input for the variables are as follow: *physical characteristics of a building (P)* include size of the building, number of rooms, number of bathrooms, availability of garage, presence of central heating system and air-conditioning, presence of sitting room, presence of landscape elements, number of floors, flooring types, private security. *Neighborhood characteristics (N)* are distance to link roads, distance to basic amenities, presence of natural landscape, availability of good access road, peculiar activities in the neighborhood such as security and distance to Central Business District (CBD). The *status of the cultural heritage site (S)* has to do with the type of cultural heritage, type of activities carried out on the cultural heritage site, the frequency of activities on the cultural heritage site and the externalities of the activities carried out on the cultural heritage site. The *distance from cultural heritage site (D)* has to do with the meters apart of the identified residential properties from the cultural heritage sites.

More so, to determine the impact of the cultural heritage sites on the residential rental value, the rent differences across the residential zones at various distances was computed using the rent differential formula stated below:

$$\text{Rent Differential (\%)} = \frac{AR - ER}{ER} * \frac{100}{1} \text{…………………………………………………… (2)}$$

Where: AR = Actual Rent (the amount (rent) the property was given out)
ER= Expected Rent (the amount (rent) the property should go for in the market)

■ **5.0 RESULTS AND DISCUSSION**

Presented in this section are the results of the analysis of data which was extracted from the survey conducted between November 2018 and February 2019. The result of the socio-economic characteristics of the respondents in the whole of the study area showed that the majority (46.8%) of the respondents were Christians and mostly resides at 601 – 900 meters from the cultural heritage sites. Following this group were traditionalists (35.0%) majority of who resides at proximate distances (300meters and below) to the cultural heritage site. Explicitly, the result of the analysis indicated that in the core area of Ile-Ife where the Oduduwa groove situates most (38.9%) of the respondents were traditionalists. However further findings showed that majority (52.7%) of the respondents in the sub-urban area where Oranfe Shrine situates were Christians. Further analysis confirmed that most (48.0%) of the respondents had secondary education followed by respondents with tertiary school education (35.4%). This was as a result of the findings in the core area and sub-urban of the study area where majority (65.5%) and (57.8%) of the respondents had secondary and tertiary education respectively. Additionally, majority (55.2%) of the respondents earned between ₦50001.00k – 100000.00k monthly (equivalent of 141 USD – 282 USD). It was observed that this group of respondents was mostly predominant in the core area of Ile-Ife and at distances 301-600 metres from the cultural heritage site. Following this group were respondents (33.2%) that earned above ₦200000.00k (equivalent of 563 USD) monthly. This group of respondents was mostly predominant in the sub-urban area of Ile-Ife at a radius of 301-600 metres from the cultural heritage site. Based these results, it could be established that the socio-economic characteristics of the residents living around the cultural heritage sites in Ile-Ife varied with increase in distance from the sites and as one moves from the core to the sub-urban area of the study area. This may influence the spatial distribution of different types of property and variation in rental value of the property.

5.1 Residential Property Types and Rental Values Distribution

Contained in Table 1a is the information on the distribution of residential property types in the study area. In the core and sub-urban areas of Ile-Ife, findings showed that 35.5%% and 72.0% of the residential properties were blocks of 3-bedroom flats while 61.0% and 18.3% were tenement buildings respectively. Prominent in the residential rental market in Ile-Ife as a whole were tenement, block of flats (3-Bedroom Flat) and detached buildings. It is evident from the computation summarized in the Table 1a that most of the residential properties in surveyed were blocks of 3-bedroom flat (48.9%). Following this group were tenement buildings (45.3%). Only 5.8% of the residential properties surveyed were detached buildings. This implies that the most predominant residential property type in study area was a block of 3-bedroom flat. The findings further suggested that the blocks of 3-bedroom flat were more available in the sub-urban area predominant at a radius of 601-900 meters from the cultural heritage sites. In the same vein, the tenement buildings were mostly found in the core area clustered around the cultural heritage sites at a radius of 300 meters and below. Thus, tenement buildings were concentrated in the core residential area. This result was expected because the core residential neighborhood of the Nigerian traditional cities including Ile-Ife is usually home to households with low income and little formal education as well as people who are mostly farmers and those who are employed in the informal sector (Adebara, 2017). As such, rented tenement accommodation for multiple low-income households with shared facilities such as kitchen, toilet and bathroom have become very popular in the area. This can also be supported with the results from the socio-economic characteristics of the respondents. Unlike the tenement buildings, findings showed that the proportion of the blocks of 3-bedroom flat was on the increase as one travels from the core to the sub-urban area. The reason for this is not far-fetched. The sub-urban area is known to be mostly inhabited by the nuclear families and those who are at the upper echelon of the income cadre. The pattern established for detached buildings also followed that of the 3-bedroom flat. Observation further revealed that tenement buildings were scarcely constructed in the sub-urban residential zones of Ile-Ife whereas blocks of flat were the order of the day in the area.

The rental value distribution presented in Table 1b showed that in the core area of Ile-Ife, the average rental values for tenement buildings, blocks of 3-bedroom flat and detached buildings were N19820.00k, N76813.95k and N118000.00k respectively. The average rental values of tenement buildings, blocks of 3-bedroom flat and detached buildings in the sub-urban area of Ile-Ife were N25333.00k, N142677.97k and N168750.00k respectively. Further analysis indicates that the average rental values for tenement buildings, blocks of 3-bedroom flat and detached buildings were N21092.31k, N103751.72k and N146153.85k respectively in Ile-Ife. It was further indicated that rental values of residential properties increased as distance increased. These findings suggested that average rental value of residential properties increased from core to sub-urban area of Ile-Ife. The result of the interview carried out with the real estate practitioners corroborated these findings that the rental values obtained were lesser than the expected rent (full rental value) in the core residential zone of Ile-Ife. This result was expected because of the characteristics of the core area of Ile-Ife which include inadequate amenities and poor layout in terms of modern land use planning.

Table 1a Distribution of residential property types in Ile-Ife

Property Type	Residential Zones		Ile-Ife
	Core	**Sub-urban**	
	Freq (%)	*Freq (%)*	*Freq (%)*
Tenement			
1-300 meters	38 (30.0)	10 (12.2)	48(21.5)
301-600 meters	32 (22.7)	1 (1.2)	33 (14.8)
601-900 meters	16 (11.3	12 (5.4)	38 (17.4)
Sub-total	*86 (61.0)*	*15 (18.3)*	*101 (45.3)*
Block of Flats (*3-Bedroom Flat*)			
1-300 meters	9 (6.3)	13 (15.9)	22 (9.9)
301-600 meters	13 (9.2)	16 (19.5)	29 (13.0)
601-900 meters	28 (19.9)	30 (36.6)	58 (26.0)
Sub-total	*50 (35.5)*	*59 (72.0)*	*109 (48.9)*
Detached Buildings			
1-300 meters	2 (1.4)	4 (4.9)	6 (2.7)
301-600 meters	2 (1.4)	3 (3.7)	5 (2.2)
601-900 meters	1 (0.7)	1 (1.2)	2 (0.9)
Sub-total	*5 (3.6)*	*8 (9.8)*	*13 (5.8)*
Total	**141 (100.0)**	**82 (100.0)**	**223 (100.00)**

Table 1b Distribution of residential rental value in Ile-Ife

Property Type	Residential Zones		Ile-Ife
	Core (₦)	Sub-urban (₦)	(₦)
Tenement			
1-300 meters	17628.6	24000.0	19400.0
301-600 meters	24857.1	25000.0	24750.0
601-900 meters	25000.0	25600.0	25000.0
Total	*19820.0*	*25333.0*	*21092.3*
Block of Flats (*3-Bedroom Flat*)			
1-300 meters	42857.1	127692.3	83703.7
301-600 meters	64829.3	141750.0	97617.7
601-900 meters	108000.0	149666.7	122920.0
Total	*76814.0*	*142678.0*	*103751.7*
Detached Buildings			
1-300 meters	88000.0	150000.0	129333.3
301-600 meters	132000.0	170000.0	154800.0
601-900 meters	150000.0	200000.0	175000.0
Total	*118000.0*	*163750.0*	*146153.9*

Note: 1 USD = ₦355

Moreover, larger proportion of the core area of Ile-Ife was developed based on the local knowledge of the early settlers and their socio-cultural values (Afon & Adebara, 2020). On the contrary, the sub-urban area of Ile-Ife is known to be largely planned based on modern land use planning (Afon & Badiora, 2018). In view of the foregoing, it appears that the characteristics of the residential areas and distance from cultural heritage sites have influence on the rental value of residential properties. The next section is devoted to the examination of the relationship between rental values of residential properties in Ile-Ife across the distances from the cultural heritage sites among other things.

5.2 Cultural Heritage Sites and Rental Value of Residential Properties

Presented in Tables 2 to 4 is the summary of the regression analysis conducted to show the interplay between cultural heritage sites and rental values of residential properties in Ile-Ife.

5.2.1 Cultural Heritage Sites and Rental Value of Properties in the Core Residential Zones of Ile-Ife (Oduduwa Groove)
Contained in Table 2 is the summary of the regression analysis conducted to show the impact of Oduduwa Groove has on rental values of residential properties in around it (*900 meters and below*). It is evident from the result of R^2 (0.694) that the independent variables computed in the model contributed highly to the variability of the dependent variable. This implies that the independent variables explained 69.50% of the variability of the dependent variable (*rental value*). The remaining 30.50% can be attributed to other factors influencing rental values of residential properties in the study area. Furthermore, findings showed that there was a significant relationship between the independent variables and the rental values of residential properties in the core area of Ile-Ife (*F- Value = 77.271 and Sig= .000*). This suggests that the independent variables examined were significant predictor of the independent variable.

Table 2 Cultural heritage sites and rental value of properties in the core residential zones of Ile-Ife

Model	R	R Square	Adjusted R Square		
1	.833[a]	.695	.685		

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	170757812365.371	4	42689453091.343	77.271	.000[b]
Residual	75135464230.373	136	552466648.753		
Total	245893276595.744	140			

Model	Unstandardized Coefficient		Standardized Coefficient	T	Sig
	B	Std. Error	Beta		
(Constant)	356281.847	70957.571		-5.021	.000
Neighborhood Characteristics	9026.985	1978.000	.441	4.564	.000
Cultural Heritage Status	2756.469	2478.105	.119	1.112	.000
Physical Characteristics	727.435	1152.487	.065	.631	.529
Distance from Cultural Heritage Sites	110.818	9.545	.585	11.610	.000

Note: Significance Level = 0.05

The test of significance result (see Table 2) established that neighborhood characteristics (*.000*), distance from cultural heritage sites (*.000*) and cultural heritage status (*.000*) had significant beta (s) while physical characteristics of the buildings (*.529*) was not significant. This implies that all the predictors were major contributor to the change in rental values of residential properties around Oduduwa Groove except the physical characteristics of the buildings. This further suggests that the physical characteristics of residential properties around Oduduwa Groove do not have a substantial contribution in determining their rental values. More so, the predictors' contribution to the dependent variable can be deduced from their standardised beta coefficient (see Table 2). All the predictors had positive beta(s). The values were *.441*, *.065*, *.585* and *.119* for neighborhood characteristics, physical characteristics of buildings, distance from cultural heritage sites and cultural heritage sites status respectively. This therefore indicates that distance from cultural heritage sites was the highest (58.50%) contributing predictor in explaining rental value and the least was physical characteristics of buildings (6.50%). Thus the regression equation is given as:

$$RV = 356281.847 + 727.435P_1 + 9026.985N_2 + 2756.469S_3 + 110.818D_4 \ldots\ldots\ldots \text{(3)}$$

The regression equation *(3)* indicates that all the independent variables (physical characteristics of buildings, neighborhood characteristics and distances of buildings from the cultural heritage and cultural heritage status) were positively correlated. Particularly, the unstandardised beta coefficient for distances of buildings from cultural heritage site which is our major concern in this study showed that holding other predictors constant, a unit change in distance (*+/- 1 metre*) will change rental value by +110.818 *(+/- 110.818)*. This suggests that as distance increases from the cultural heritage sites, rental value was also on the increase. In other words, the closer the residential properties are to the cultural heritage sites, the lower the rental values and vice-versa.

5.2.2 Cultural Heritage Sites and Rental Value of Properties in the Sub-Urban Residential Zones of Ile-Ife (Oranfe Shrine)

Table 3 presents the summary of the regression analysis conducted to show the impact of Oranfe Shrine has on rental values of residential properties in around it (*900 meters and below*). The result of R^2 (0.857) established that the independent variables computed in the model contributed highly to the variability of the dependent variable. This implies that the independent variables explained 85.70% of the variability of the dependent variable (*rental value*). The remaining 14.30% can be attributed to other factors influencing rental values of residential properties in the study area. Furthermore, findings showed that there was a significant relationship between the independent variables and the rental values of residential properties in the sub-urban area of Ile-Ife (*F- Value = 16.036 and Sig= .000*). This suggests that the independent variables examined were significant predictor of the independent variable.

Table 3 Cultural heritage sites and rental value of properties in the sub-urban residential zones of Ile-Ife

Model	R		R Square		Adjusted R Square	
1	.926[a]		.857		.846	

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	116749385711.781	4	29187346427.945	16.036	.000[b]
Residual	140145492337.000	77	1820071329.052		
Total	256894878048.781	81			

Model	Unstandardized Coefficient		Standardized Coefficient	T	Sig
	B	Std. Error	Beta		
(Constant)	23544.012	110361.196		-.213	.832
Neighborhood Characteristics	-4052.186	2893.574	-.396	-1.400	.165
Cultural Heritage Status	-2260.553	2736.139	-.134	-.826	.411
Physical Characteristics	4793.787	1688.002	.775	2.840	.002
Distance from Cultural Heritage Sites	115.782	21.965	.491	5.271	.000

Note: Significance Level = 0.05

The test of significance result (see Table 3) indicated that distance of residential buildings from cultural heritage sites (*.000*) and physical characteristics of the buildings (*.002*) were significant. Furthermore, neighborhood characteristics (*.165*) and status of cultural heritage (*.411*) were not significant. The result suggests that distance of buildings from cultural heritage sites and physical characteristics of buildings were the major contributor to the change in rental values of residential properties around Oranfe Shrine. On the contrary, the neighborhood characteristics and the status of the cultural heritage do not have a substantial contribution in determining their rental values of residential properties round Oranfe Shrine. More so, the predictors' contribution to the dependent variable can be deduced from their standardised beta coefficient (see Table *3*). The distances of residential properties from cultural heritage sites (*.491*) and physical characteristics of the buildings (*.775*) had positive beta(s). The neighborhood characteristics (-*.396*) and cultural heritage sites status (-*.134*) had negative beta(s). This therefore suggests that physical characteristics of buildings was the highest (77.50%) contributing predictor in explaining rental value and the least was the status of cultural heritage (6.50%). Thus the regression equation is given as:

$$RV = 23544.012 + 4793.787P_1 - 4052.186N_2 - 2260.553S_3 + 115.782D_4 \ldots\ldots\ldots \text{(4)}$$

The regression equation *(4)* indicates that the predictors (physical characteristics of buildings and distances of buildings from the cultural heritage site) were positively correlated while (neighborhood characteristics and cultural heritage status) were negatively correlated. Particularly, the unstandardised beta coefficient for distances of residential properties from cultural heritage site which is our major concern in this study showed that holding other predictors constant, a unit change (*+/- 1 meter*) will change rental value by 115.782 *(+/- 115.782*). This suggests that the closer the residential properties are to the cultural heritage sites the lower the rental values and vice-versa.

5.2.3 Cultural Heritage Sites and Rental Value of Properties in Ile-Ife

It is evident from the result of R^2 (0.640) that the independent variables computed in the model contributed highly to the variability of the dependent variable. This implies that the independent variables explained 64.00% of the variability of the dependent variable (*rental value*). The remaining 36.00% can be attributed to other factors influencing rental values of residential properties in the study area. Further analysis showed that there was a significant relationship between the independent variables and the rental values of residential properties in Ile-Ife (*F = 96.774 and Sig= .000*). This gives an indication that the independent variables examined were significant predictor of the independent variable.

The test of significance result (see Table 4) established that neighborhood characteristics (*.000*), physical characteristics (*.000*), distance from cultural heritage sites (*.000*) and cultural heritage status (*.043*) were all significant. This was deduced from the value of significance of each of the predictors which was less than *0.05*. This implies that all the predictors were major contributor to the change in rental values of residential properties in the study area. More so, the extent of their contribution can be deduced from the standardised beta coefficient (see Table 2). The neighborhood characteristics (*.058*), physical characteristics (*.399*) and distance from cultural heritage sites (*.543*) had positive beta(s) while cultural heritage status (-.*145*) had a negative beta. This therefore suggests that distance from cultural heritage sites was the highest (54.30%) contributing predictor in explaining rental value and the least was neighborhood characteristics (5.80%). Thus the regression equation is given as:

$$RV= 82590.583 + 2970.045P_1 + 765.047N_2 - 2833.463 S_3 + 131.832 D_4 \ldots\ldots\ldots (5)$$

Table 4 Cultural heritage sites and rental value of residential properties in Ile-Ife

Model	R	R Square	Adjusted R Square
1	0. 800	0.640	0.633

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	446808956608.397	4	111702239152.099	96.774	.000
Residual	251628056844.517	218	1154257141.489		
Total	698437013452.915	222			

Model	Unstandardized Coefficient		Standardized Coefficient	T	Sig
	B	Std. Error	Beta		
(Constant)	82590.583	58490.933		-1.412	.159
Neighborhood Characteristics	765.047	1549.740	.058	.494	.000
Cultural Heritage Status	-2833.463	1394.890	-.145	-2.031	.043
Physical Characteristics	2970.045	660.388	.399	4.497	.000
Distance from Cultural Heritage Sites	131.832	10.185	.543	12.944	.000

Note: Significance Level = 0.05

The regression equation *(5)* indicates that physical characteristics of buildings, neighborhood characteristics and distances of buildings from the cultural heritage sites were positively correlated to the rental values of residential properties in the study area while cultural heritage status was negatively correlated. Particularly, the unstandardised beta coefficient of distances of buildings from cultural heritage site which is our major concern in this study showed that holding other predictors constant, a unit change (*+/- 1 meter*) will change rental value by 131.834 *(+/- 131.834*). This might be linked to the result from the rental value and property type distribution (Table 1a and Ib). Furthermore, the real estate practitioners established that despite the effect of the cultural heritage site on the rental value of residential properties averagely, full rental values were gotten from properties farther from the sites. This suggested that residents paid full rental values residential properties farther away from the cultural heritage sites and paid less for residential properties proximate to the cultural heritage sites. Having examined that there exists a positive relationship between residential rental value and distances of buildings form the cultural heritage site, it is also important to investigate the impact of the cultural heritage sites on the rental value of residential properties. This is the focus of the next section.

5.3 Impact of Cultural Heritage Sites on Rental Value of Residential Properties

Table 5 presents the impact of cultural heritage sites on rental value using rent differential approach (see Methodology). In the core residential zone of Ile-Ife findings showed that the percentage change in rental value for tenement buildings, blocks of 3-bedroom flat and detached buildings were -33.93%, -35.99% and -21.33% respectively. Deducible from the foregoing is that the presence of cultural

heritage sites in the core residential zones reduced rental value of tenement buildings, blocks of 3-bedroom flat and detached buildings by 33.93%, 35.99% and 21.33% respectively indicating a negative impact on the rental values of properties. Further findings showed that there was a negative impact of the cultural heritage sites on residential rental value across the distances although the impact reduces as distance from the sites increases.

Furthermore, in the sub-urban residential zone of Ile-Ife findings showed that the percentage change in rental value for tenement buildings, blocks of 3-bedroom flat and detached buildings were -15.56%, -4.88% and -9.03% respectively. Deducible from the foregoing is that the presence of cultural heritage sites in the core residential zones reduced rental value of tenement buildings, blocks of 3-bedroom flat and detached buildings by 15.56%, 4.88% and 9.03% respectively deducing a negative impact on the rental values of properties. Further findings showed that there was a negative impact of the cultural heritage sites on residential rental value across the distances although the impact reduces as distance from the sites increases.

Table 5 Impact of cultural heritage sites on rental value of properties

Property Type	Residential Zones		Ile-Ife
	Core (%)	Sub-urban (%)	(%)
Tenement			
1-300 meters	-41.24	-20.00	-36.67
301-600 meters	-17.14	-16.67	-17.50
601-900 meters	-16.67	-14.67	-16.67
Total	-33.93	-15.56	-29.69
Block of Flats (*3-Bedroom Flat*)			
1-300 meters	-64.29	-14.87	-37.99
301-600 meters	-45.98	-5.50	-27.69
601-900 meters	-10.00	0.00	-8.95
Total	-35.99	-4.88	-23.15
Detached Buildings			
1-300 meters	-41.33	-16.67	-21.62
301-600 meters	-12.00	-5.56	-6.18
601-900 meters	0.00	11.11	6.06
Total	-21.33	-9.03	-11.42

Note: Expected Rent (tenement): Core = ₦ 30000; Sub-urban = ₦ 30000, Expected Rent (Blocks of Flat): Core = ₦ 120000; Sub-urban = ₦ 150000, Expected Rent (Detached): Core = ₦ 150000; Sub-urban = ₦ 180000, 1 USD =₦355

On the aggregate, in Ile-Ife percentage change in rental value for tenement buildings, blocks of 3-bedroom flat and detached buildings were -29.69%, -23.15% and -11.42% respectively. This suggested that the presence of cultural heritage sites in Ile-Ife reduced rental value of tenement buildings, blocks of 3-bedroom flat and detached buildings by 29.69%, 23.14% and 11.42% respectively deducing a negative impact on the values. Across the distances, the findings further indicted that there was a negative impact of the cultural heritage sites on residential rental value although the impact reduces as distance from the sites increases. This finding can be corroborated with the study of Moro et al. (2013) and Adegoke and Adebara (2019). The responses of the real estate practitioners during the interview session further supported the findings that residential properties closer to the cultural heritage sites does not command full rental value. In the same vein, the findings established that for block of 3-bedroom flat and detached buildings in the sub-urban areas of Ile-Ife the change in rental values reached positive at distances 601-900 meters. Responsible for this could be the proximity of the residential properties to Obafemi Awolowo University Teaching Hospital (OAUTH). In the same vein, the impact of distance of cultural heritage sites on rental value of residential properties appears higher in the core residential zone of Ile-Ife. The reason for this can be linked to the submission of Adebara (2017) on the physical planning characteristics of the core and sub-urban residential zones of Ile-Ife. Further observation showed that the impact of cultural heritage site on rental value of residential properties has a spatial dimension which is in line with the submissions of Moro et al. (2013), Oyedeji (2018) and Adegoke and Adebara (2019).

■6.0 CONCLUSION

The study provided information on the interplay between cultural heritage sites and rental values of residential properties in Ile-Ife. In achieving this, information of the rental values and property type distribution were investigated. Also the links among physical characteristics of buildings, neighborhood characteristics, cultural heritage status and the distances of residential properties from the cultural heritage sites and residential rental value in Ile-Ife were determined across various distances i.e. 1-300, 301-600 and 601-900 meters. Furthermore, the impact of the distance of cultural heritage sites on rental value of residential properties was determined. Findings showed that the most predominant residential property type in Ile-Ife were blocks of 3-bedroom flat followed by tenement buildings. The findings further suggested that the blocks of 3-bedroom flat were largely found at distances 301-900 meters while the tenement buildings were mostly clustered around the cultural heritage sites at distances 300 meters and below. In the same vein, the average rental value of residential properties increased from core to sub-urban area of Ile-Ife. More so, findings showed that there exists a positive relationship between the distance from cultural heritage sites and residential rental values. Finding further suggested that there was a negative impact of the cultural heritage sites on residential rental value across the distances although the impact reduces as distance from the sites increases.

The findings of this study have policy implications: the information provided in the study suggests that policy makers and investors should include the characteristics of a typical traditional city like Ile-Ife in locating residential properties. This is essential because the ability to recoup capital is dependent on where the property is located.

However, the study has its limitations. First, the study only concentrated on cultural heritage sites. Other type exists in the study area such as institutional and recreational heritages among others. Future studies should look in this line by carrying out a comparative analysis that can tell the influence of each of the types of heritage on residential rental value. Second, the study concentrated majorly on rental value, the analysis of sales value will also be useful for further research. Finally, analysis of this kind can be carried out across various cultures in Nigeria, this will contribute to the body of knowledge by providing information on the influence of historical heritage on residential property value in Nigeria.

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