

COMPARATIVE ANALYSIS OF COMMERCIAL PROPERTY INVESTMENTS RISK AND RETURN IN CALABAR METROPOLIS, NIGERIA

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Abstract

The study compared and analysed commercial property investments risk and return in Calabar Metropolis, Nigeria from 2014 to 2018 with a view to considering which type of commercial property investment is less risky. The study adopted the survey research design and purposive sampling technique was used to select estate surveying and valuation firms who provided data for the study on rental and capital values of offices and shops. Data was analysed using mean total returns, standard deviation and analysis of variance. The test of the first hypothesis indicates that the p-values (0.461, 0.201, 0.632 & 0.684) associated with the computed F-values (1.005, 1.542, 0.234 & 0.622) for corrected model, location, type, and location by type interaction, are all greater than .05. The null hypothesis was therefore retained implying that location and type of commercial real estate have no significant main and interaction influence on the annual total returns on investments. The second hypothesis results indicate that the p-values (0.255, 0.298, & 0.116) associated with the computed F-values (0.925, 0.769, & 1.327) for corrected model, location and type of property, were also all greater than 0.05. Consequently, the null hypothesis was retained which imply that risk of investment in commercial real estate does not vary significantly with location and type of property. Consequently, shops performed better than offices in terms of return and also with a lower risk within the five-year period under review. It is recommended that investors should endeavour to study the performance profile of investments before making investment decisions, then just relying on intuitive decision making. Investors should always get advice or opinion from estate surveyors and valuers before going into any real estate investment. It is also recommended that the real estate investors should be guided by the annual returns of their property investments as well as the risk attached to them to ensure proper analysis of their property investments performance.

Keywords: Commercial Property, Investment, Performance, Return, Risk.

1. Introduction

Real estate has continued to play a substantial role in man's development. In recent time, investors in Nigeria have begun to explore strongly into real estate marketing and investments which often represents the single largest investment (Davis and Palumbo, 2008).

Oyewole (2013) opined that the property market plays an important role in real estate investment whether residential, commercial, industrial, agricultural etc. The performance of the real estate investment market depends on the major actors and players in the property market i.e. buyers and sellers of interests or

property rights. In this form of market, unlike other forms of markets such as the Stock Exchange Market, it has no central dealing spot but is peculiar to geographical location (Evans, 2004). It could also be a system of transaction between land owners, land users and estate surveyors and valuers.

Property markets besides being categorized based on local geographical locations, are also segmented into commercial property market, residential property market, industrial property market and agricultural property markets. Commercial property market is said to be the most intensively developed and capitalized (Dugeri, 2011). Investment in real estate is the type of investment that is income producing or that generates income for the owner. The Nigerian property market with its potential, like similar markets in several emerging economies in Africa, has not benefited from internationalized property investment and remains poorly researched (Dugeri, 2011). The author noted further that the study of performance of real estate investment market, whether residential or commercial, is very important because emphasis is on investment performance analysis in many parts of the world. This is even more important in Nigeria where only few studies have been carried out on the level of performance achieved by property investments.

Moreover, the impact of the on-going changes in the global and local economy on the performance of real estate investment market is serving to highlight the need for its careful consideration in the investment decision making process. Many studies have been carried out on investment performance comparing residential and commercial property investment or commercial with stocks and shares but none has been carried out in the study area to analyse only commercial property investments. It is in view of this that the study compared and analysed the performance of commercial real estate investment market in Calabar from 2014-2018 in order to advice investors on the level of risk of each investment.

1.1 Concept of Real Estate Investment

Real estate is composed of several distinct areas of investment opportunities such as residential, commercial, industrial, agricultural or recreational. Real property has a number of characteristics which make it different from other investment assets including fixed location, heterogeneity, high unit value, illiquidity and the use of valuations to measure performance (Hoesli and MacGregor, 2000).

Real estate or immovable property is a legal term encompassing land with anything permanently affixed to it. Real estate (immovable property) is synonymous with real property called realty, in contrast with personal property (also sometimes called chattel). There are many types of property available for an investor and a variety of interests in such properties.

Millington (1982) cited in Ogunleye (2015) identified these interests and types of property as freeholds, short or long term leaseholds, ground rents, offices, shops, factories, warehouses and each of these interests or rights or types of property will have different features which make them more or less attractive to investors depending upon the circumstance and the requirements of the particular interest. Property is thus seen as subject of ownership which concerns the right of individuals, persons, sovereign power and the exercise of such rights of ownership, use and the nature of such rights are subject to influence human activities (Ogunleye, 2015).

Investment generally is the giving up of a capital sum in expectation of future returns. Ajayi (1998) defined investment as the act of laying out money now in return for a future financial reward. This reward may be received in the form of an income flow or by the receipt of a single capital sum or a combination of both. Ogbuefi (2002) sees investment as the parting with present capital in return for future income. Investment has varying dimensions depending on the nature, quality and area of the investment. Investment is the action or process of committing funds to some form of purchase,

ownership, management, rental or sale with a view to preserving capital invested, providing a stream of income in the future or selling at a higher price for profit (Ogunba and Ajayi, 2018).

The essential nature of any investment is the foregoing of capital sum in return for a regular income over a period of time (Enever and Isaac, 1994). This definition identifies two attributes; time and risk. The sacrifice is now and certain while the reward comes later and the rate is often uncertain. Investment is an economic activity designed to increase, improve or maintain the productive quality of the existing stock of capital, acts as catalyst in economic development and have the objective of profit maximization, wealth maximization and/or social maximization (Nwanekezie, 2018).

Ajayi (1998) noted that two basic elements are fundamental to understanding of investment. The first being the anticipated return which is easier to perceive and measure and the second is risk which is a difficult concept to perceive and possess serious conceptual and analytical problems in terms of measurement. The underlying motive for any investment outlay is the anticipated stream of future returns. The certainty of the returns is often affected by different factors beyond the investor's control. This however, shows that there is risk in relation to loss of capital or the return expected. It is therefore necessary for investors to assess the risk associated with investment to aid in their decision making.

Ezeokoli, Adebisi and Olukolajo (2014) see the outcome of any good investment appraisal to form the basis for decision making. Real estate generally is capital intensive with varying type of risks. Every investment has certain attributes and qualities. Ogbuefi (2002) identified five attributes of investment to include risk, return, liquidity, manageability and taxability. Ajayi (1998) identified the qualities of an investment to include capital security, capital growth, income security, income growth, return, tax treatment, and timing of receipts, transferability of marketability, transfer costs, divisibility,

depreciation, risk, management and maintenance expenses. Nwanekezie (2018) also identified the qualities of investment to include security of capital, security of income, liquidity and manageability.

1.2 Commercial Real Estate Investment Market

Commercial properties are real estate developments or use of land that entertain business operations and connote the highest form of return on real estate investment (Bello, 2003; Dugeri, 2011). In other words, they are properties that are not exclusively residential in which commercial activities takes place. The economic returns on these properties come in annually or as agreed by the parties involved. Commercial properties in Calabar consist of shops, offices, shopping centres, and mixed uses. Individual commercial properties situate on major streets in Calabar while mixed commercial/residential uses are found in medium business areas (Mfam and Kalu, 2012).

Nwanekezie (2018) opined that commercial property investment markets occupy a prime place in the property market because it has good number of property investment either as direct or indirect into real estate. The best commercial property investments are those located in central positions where the value can be said to reside in the site and not in the building itself. Commercial properties have been regarded as very secure investment with capital appreciation and few management difficulties. One of the major determinants of commercial real estate is location. Shops vary in size and type from the out of town supermarket through the good shopping centers. Other factors that determine the rental value of shops are the area of the frontage, layout for display of goods, condition of the property, sanitary arrangement and access to rear for delivery (Nwanekezie, 2018).

Office positioning is less crucial than shops. They need to be located in areas that are served by good transport and other facilities, the precise position within the general locations are generally less important. The commercial

property market in the study area is very active be it offices or shops and are usually in the Central Business District (CBD). Examples include; Marian Road, MCC Road, Eta Agbor Road, Calabar Road, and Murtala Mohammed Highway area of Calabar Metropolis.

2. Performance Evaluation of Real Estate

2.1 Investment Risk and Return

The level of return from a real estate investment is the most significant factor influencing investment decision because it determines the profit to be made from the investment. There are certain significant cost and expenses that comes with investment, this includes annual rate, levies, tax and maintenance cost, this can influence decision to invest in real estate. Rent is regarded as the financial return to land resources.

Key real estate market participants such as investors always use rental value as a pointer to evaluate the profitability of their real estate investment (Fisher, 2005). Real estate returns are often driven by different factors which are basically rents and capital appreciation. Quarterly and monthly returns are not correctly reflected by annual returns (Fisher, 2005). Real estate returns are taken into account in asset allocation decision making because of its special features. The number of studies devoted to examining the performance of real estate as an investment category is very small compared with studies for other asset markets, and yet real estate represents an important component of invested funds.

Olaleye, Adegoke and Oyewole (2009) examined the characteristics of direct property and listed Property Company in comparison with other securities in the Nigerian Stock Exchange over the period of 2001 to 2007. The study evaluated the capital return and diversification potential of the investment media through the use of mean return, standard deviation, correlation and Sharp market index model. The results showed that while various investment options in real estate and stock market offered attractive returns, real estate investment outperformed stocks and

offered diversification benefits for investors of a mixed assets portfolio.

Real estate investment has a low return variability and downside risk with respect to definite targeted returns. When the economic activities of a place is high, there will be an increase in demand for commercial property but when the economic activity is low, the demand for commercial properties will be reduced and in turn will affect the investors choice of investing in commercial property. Most institutional investors invest in commercial properties which are mainly offices and retail shops (Karakozova, 2005). In Nigeria, the returns from commercial property investments are comparable to that in other parts of the world. It is the type of real estate investment that historically has produced reasonable returns for a lot of investors.

In the view of Udoetuk (2008), the evaluation of property performance is difficult as it is based on the changes in the capital value of the investment flow and the income generated by the investment. Udoetuk (2008) and Kalu (2001) asserted that real estate, unlike other types of investment is unique in nature and location; real estate may not be regularly revalued and if the property has not been tested in the market, there will be no specific evidence in terms of rental value, yields, capital value, etcetera. The figures so obtained are usually based on historic cost data from which comparable evidence can be drawn. Based on the unique nature of real estate, it is difficult to assess future trends from historic data and estimate changes in the real estate investment market. Udoetuk (2008) opined however that a careful analysis of the past can equip an investor with an idea of the future returns from an investment, the type of property to invest in and in what location to invest in.

Kalu (2001) stated that in performance appraisal, the main measure is the overall or total return which is further disaggregated into income return and capital appreciation. The total return produced by capital invested over a time period is given as follows:

$$TR_t = \frac{NI_t + (CV_t - CV_{t-1})}{CV_{t-1}}$$

Where:

TR_t = Total return for period t

CV_{t-1} = Capital value at the beginning of period t

CV_t = Capital value at the end of period t

NI_t = Net income received during the holding period t

Total return is also known as holding period return in the securities market.

Several studies have been carried out on the performance of commercial real estate investments and comparing it with other investments either in stocks, shares and bonds. These studies have been conducted both in the developed countries and developing countries including Nigeria. Newell and Hsu (2007) study examined the performance of retail property in the Australian market between 1995 and 2005 using both public and private retail property. On a risk-adjusted basis, the study found that public and private retail properties have substantial risk-adjusted returns.

Risk-adjusted performance analysis was used to assess the added value of retail property in a mix-asset portfolio, with the portfolio diversification benefits of retail property also assessed. The study found that retail property and retail Listed Property Trusts (LPTs) have delivered substantial risk-adjusted returns and portfolio diversification benefits between 1995 and 2005. The retail property sub-sectors of retail property type, size and region have different performance characteristics, particularly highlighting the substantial role of geographic diversification as the most effective portfolio diversification strategy for retail property investors. This study only considers one sector of the commercial property investment (retail/shop) using both public and private retail property on a risk adjusted basis without taking note of any other type of commercial property (office) and was conducted outside the study area.

Oyewole (2013) conducted a study on a comparative analysis of residential and retail commercial property investment performance

in Ilorin from 2000 – 2011 focusing on average return, risk adjusted return, income growth and capital appreciation. The result of his study indicates that retail commercial property investments performed better than residential property investments with a mean annual return of 14.2% as against 11.8%. On the basis of risk adjusted return, the study reveals that commercial property investments performed also better than residential property investment with a sharp index of 1.11 as against 0.55. Comparing income and capital growth, commercial property investments performed also higher than residential during the period of measurement.

The study concluded that while both residential and commercial property investments performed well with positive mean returns and risk adjusted returns, commercial property outperformed residential property investment. This study considered residential property with one sector of commercial property investment (retail/shop) without taking note of any other type of commercial property like offices.

Diala, Kalu and Igwe-Kalu (2016) examined the effects of exchange rate volatility on commercial property returns in Nigeria. The study looked at the relationship between commercial property and market and foreign exchange markets in Nigeria from 2000 -2010. The study adopted the Exponential Generalized Auto-Regressive Conditional Heteroscedasticity (EGARCH) to establish the relationship between exchange rate volatility and property investment returns volatility in Nigeria. The study found that there exists a positive insignificant relationship between

commercial property returns and Naira/US Dollar exchange rate movement in Nigeria. The study concluded that there is volatility persistence of exchange rate on commercial property returns which implies that current period rate has an effect on the forecast variance of future rate. This study looked at the relationship between commercial real estate market and foreign exchange markets in Nigeria at large without focusing on a particular state in Nigeria.

Mfam, Kalu and Igwe-Kalu (2017) conducted a study which analyzed the co-movement of direct commercial and residential real estate investment returns in South Eastern Nigeria from 2000 – 2013. The study collected data from firms in eight cities using judgment sampling technique with a sample size of 100 residential and commercial properties in each city. At the city level, the study showed that Calabar and Onitsha produced the maximum (22.15%) and minimum (12.5%) mean returns respectively on commercial real estate investment while Owerri and Awka produced maximum (19.42%) and minimum (8.54%) mean returns on residential real estate investment.

At the regional, commercial sector produced higher (16.62%) mean returns than residential sector (14.93%). The study found that at the regional level, the correlation produced a low positive co-movement though significant. All positive and negative correlations at city and regional levels can contribute effectively to the construction of portfolios that will increase returns and reduce risk because there is no strong or perfect positive co-movement.

The study concluded that commercial real estate investment outperformed residential real estate investments at both city and regional level. But the study failed to look into the disparities between the performances of commercial (shop and office) real estate investment market in Calabar but rather compared residential and commercial property markets for both city and regional level of different states.

Diala (2016) analyzed the risk and returns characteristics of residential and commercial investments in Nigeria using Abuja and Port Harcourt property markets with the aim to identify the property class and markets that give the variability in returns. The study analyzed data using the Arithmetic Mean Return (AMR), Standard Deviation (SD) and Coefficient of Variation (CV). The study found that residential and commercial real estate investments produced good returns and at the same time showed wide variability in returns. The study concluded that residential and commercial property investments in Nigeria produced good returns but is very risky investments as shown in their wide variability in returns.

The study recommended that prospective investors in the real estate market should take into consideration the risk-return characteristics of the various categories of real estate so as to ensure informed investment decision. This study failed to show among residential and commercial real estate investment, which one performed better either on return or risk. Mfam and Kalu (2012) study examined the analysis of return and risk in direct residential and commercial real estate investments in Calabar over a period of 17 years. The result from the study shows that mean returns at the sectorial levels of residential and commercial real estate are at 23% and 23.83% respectively and 11.27% and 10.06% respectively for the associated risk.

The study also reveals that there is a significant difference in total risk between the residential and commercial sectors with the total risk in the residential sector being significantly higher than that of the commercial sector. The study shows commercial sector performed better than the residential sector in terms of risk and return. This study considered two sectors of real estate investments (residential and commercial) and failed to focus and analyse the performance on one sector of real estate investment and the disparities in its sub-sectors in the study area which this research intends to address.

Oyewole (2014) compared and analyzed direct and indirect real estate investment performance in Lagos between 2000 and 2012. The study analyzed total return for each of the real estate investments using mean returns, standard deviation, coefficient of variation and the Sharpe index. Findings from this study indicate that indirect real estate investments performed better than direct real estate investments on a normal basis with a mean annual return of 34.21% as against 30.29% and 25.69% for direct commercial and residential real estate investments respectively.

In terms of risk-adjusted performance, the study shows that direct real estate investments performed better with coefficient of variation of 0.16 and 0.24 for residential property and commercial property as against 3.02 for indirect real estate investments. This study concluded that investors stand to benefit more if they consider direct real estate investments.

Igwe-Kalu and Akpan (2019) compared and analysed the returns on residential and commercial property investments in Kaduna metropolis from 2003 to 2015. The study used a population of 70 registered estate surveyors and valuers in Kaduna while 35 who were in operation during the time of the study constituted the sample size for the study and questionnaire was administered on them. The result from this study in Kaduna showed that commercial property investments performed better in terms of rental value growth and returns with 8.9 and 4.95 as against 8.52 and 4.0. Statistically, the study showed that there is a significant relationship between returns on residential and commercial property investments and their correlation coefficient is 0.7734. The study concluded that residential and commercial property investments should not be combined in a portfolio in Kaduna metropolis because their correlation coefficient is positive.

This study also is limited only to Kaduna metropolis and only considers investment returns and disregarding the measurement of investment risk. From all the above, none of the

works has actually compared commercial real estate investment with respect to shops and offices in the study area. Hence there is a need for a work of this nature that will bridge the gap noticed in the literature.

The study on comparative analysis of the performance of commercial real estate investments is very essential to all investors in the commercial real estate sector in Calabar Metropolis. The aim of every investor in the real estate sector is to achieve maximum return while trying to minimize risk. Majority of private investors are putting considerable sums of money into real estate investment annually without investor's knowledge and understanding of the performance of these sectors. The investors base their investments mainly on commercial properties but there is no basis for their decision apart from the fact that many of the investors believe that tenant risk is lower in commercial property investment than in other real estate investments while some merely focus on the rental trend of the properties. As the number of investors in the commercial real estate sector increases, they require a strategic balance in their expected returns and risk to be associated with their choice of investment.

In Calabar, the only study conducted in this area is that of Mfam and Kalu (2012) examining risk return in direct commercial and residential real estate investments in Calabar. Also Mfam, Kalu and Igwe-Kalu (2017) who examined the co-movement of direct commercial and residential real estate investment returns in South Eastern Nigeria. It is in view of this that the study comparatively analysed the performance of commercial real estate investment market in Calabar from 2014-2018.

3. Materials and Methods

The study adopted the descriptive survey research design. The study area is Calabar metropolis comprising of Calabar Municipality and Calabar South Local Government Area. The population of the study comprised of 14

Estate Surveying and valuation firms who are in active practice and provided data on rental and capital values of commercial properties in Calabar metropolis. Purposive sampling technique was used in selecting 24 units each of offices and shops in the selected six commercial neighbourhoods in the study area. Primary data was collected using questionnaire administered on all the practicing estate

surveying and valuation firms selected in the study area. Descriptive statistics using frequency tables and percentage distribution were used in analysing the data, mean total returns were computed using the total returns formula, total risks were computed with the use of standard deviation while the hypotheses were tested using the analysis of variance (ANOVA).

4. Results and discussion

Table 4.1.1: Average rental values for shops from 2014– 2018 in Calabar Metropolis

Location	2014	2015	2016	2017	2018
Marian Road	144,333	165,000	190,833	214,167	225,000
Calabar Road	128,333	140,000	150,833	167,500	178,333
Etta Agbor Road	130,000	141,667	160,833	167,500	180,000
MCC Road	150,000	153,333	180,833	190,833	216,667
IBB Way	158,333	161,667	169,167	180,833	191,667
M/M Highway	160,000	166,667	184,000	193,333	216,667

Source: Field Work, 2019

The above table shows the rent for shops in six different neighbourhoods in Calabar metropolis. For Marian Road, the rental values ranges from ₦148,333 to ₦225,000 from 2014 to 2018. For Calabar Road, the rent ranges from ₦128,333 to ₦178,333 from 2014 to 2018. For Etta Agbor, the rent ranges from ₦130,000 to ₦180,000 from 2014 to 2018. For MCC Road,

the rent ranges from ₦150,000 to ₦216,667 from 2014 to 2018. IBB Way the rent ranges from ₦158,333 to ₦191,667 from 2014 to 2018. Finally, in Murtala Mohammed Highway, the rent ranges from ₦160,000 to ₦216,667 from 2014 to 2018. The rental values for shops differ in the six commercial neighbourhoods in the period under review.

Table 4.1.2: Average Rental values for office space from 2014 - 2018 in Calabar Metropolis

Location	2014	2015	2016	2017	2018
Marian Road	250,000	263,333	323,333	340,000	416,667
Calabar Road	250,000	266,667	278,333	300,000	303,333
Etta Agbor	203,333	216,667	228,333	253,333	264,167
MCC Road	253,333	265,000	285,000	310,000	316,667
IBB Way	216,667	250,000	273,000	276,000	286,667
M/M Highway	295,000	300,000	316,667	370,000	385,000

Source: Field Work, 2019

The above table shows the rent of offices in six different areas in Calabar. For Marian Road, the rental values ranges from ₦250,000 to ₦416,667 from 2014 to 2018. For Calabar Road, the rent ranges from ₦250,000 to ₦303,333 from 2014 to 2018. For Etta Agbor, the rent ranges from ₦203,333 to ₦264,167 from 2014 to 2018. For MCC Road, the rent

ranges from ₦253,333 to ₦316,667 from 2014 to 2018. In IBB Way the rent ranges from ₦216,667 to ₦286,667 from 2014 to 2018. Finally, in Murtala Mohammed Highway, the rent ranges from ₦295,000 to ₦385,000 from 2014 to 2018. The rental values for offices also differ in the six commercial neighbourhoods in the period under review.

Table 4.1.3: Capital values for shops from 2014– 2018 in Calabar Metropolis

Location	2014	2015	2016	2017	2018
Marian Road	3,955,138	4,399,560	5,088,358	5,710,562	5,999,400
Calabar Road	3,421,858	3,696,000	4,021,798	4,466,220	4,755,058
Etta Agbor Road	3,466,320	3,777,422	4,288,438	4,466,220	4,799,520
MCC Road	3,999,600	4,088,458	4,821,718	5,088,578	5,777,222
IBB Way	4,221,778	4,310,702	4,510,682	4,821,718	5,110,622
M/M Highway	4,266,240	4,444,022	4,906,176	5,261,674	5,777,222

Source: Field Work, 2019

The above table shows the capital values of shops in six different locations in Calabar. For Marian Road, the capital value ranges from ₦3,955,138 to ₦5,999,400 from 2014 to 2018. For Calabar Road, the capital value ranges from ₦3,421,858 to ₦4,755,058 from 2014 to 2018. For Etta Agbor, the capital value ranges from ₦3,466,320 to ₦4,799,520 from 2014 to 2018. For MCC Road, the capital value ranges

from ₦3,999,600 to ₦5,777,222 from 2014 to 2018. In IBB Way the capital value ranges from ₦4,221,778 to ₦5,110,622 from 2014 to 2018. Finally, in Murtala Mohammed Highway, the capital value ranges from ₦4,266,240 to ₦5,777,222 from 2014 to 2018. The capital value for shops differs in the six commercial neighborhoods in the period under review.

Table 4.1.4: Capital values for offices from 2014– 2018 in Calabar Metropolis

Location	2014	2015	2016	2017	2018
Marian Road	6,666,000	7,021,498	8,621,338	9,065,760	11,110,022
Calabar Road	6,666,000	7,110,422	7,421,458	7,999,200	8,088,058
Etta Agbor Road	5,421,658	5,777,222	6,088,258	6,754,858	7,043,762
MCC Road	6,754,658	7,065,960	7,599,240	8,265,840	8,443,622
IBB Way	5,777,222	6,666,000	7,279,272	7,359,264	7,643,702
M/M Highway	7,865,880	7,999,200	8,443,662	9,865,680	10,265,640

Source: Field Work, 2019

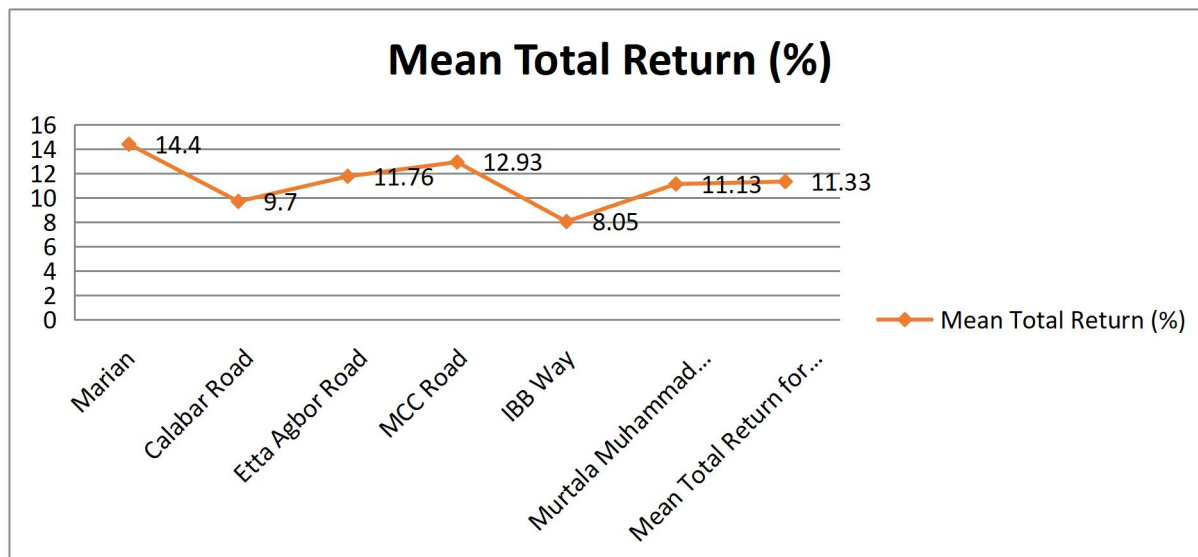
The above table shows the capital values of offices in six different locations in Calabar. For Marian Road, the capital value ranges from ₦6,666,000 to ₦11,110,022 from 2014 to 2018. For Calabar Road, the capital value ranges from ₦6,666,000 to ₦8,088,058 from 2014 to 2018. For Etta Agbor, the capital value ranges from ₦5,421,658 to ₦7,043,762 from 2014 to 2018. For MCC Road, the capital value ranges

from ₦6,754,658 to ₦8,443,622 from 2014 to 2018. In IBB Way the capital value ranges from ₦5,777,222 to ₦7,643,702 from 2014 to 2018. Finally, in Murtala Mohammed Highway, the capital value ranges from ₦7,865,880 to ₦10,265,640 from 2014 to 2018. The capital value for offices differs in the six commercial neighbourhoods in the period under review.

Table 4.1.5: Mean (Average) Total Return of Shop Real Estate Investment in Calabar

Location	Mean Total Return (%)
Marian	14.40
Calabar Road	9.70
Etta Agbor Road	11.76
MCC Road	12.93
IBB Way	8.05
Murtala Muhammad Highway	11.13
Mean Total Return for shop	11.33

Source: Field Work, 2019



Source: Field Work, 2019

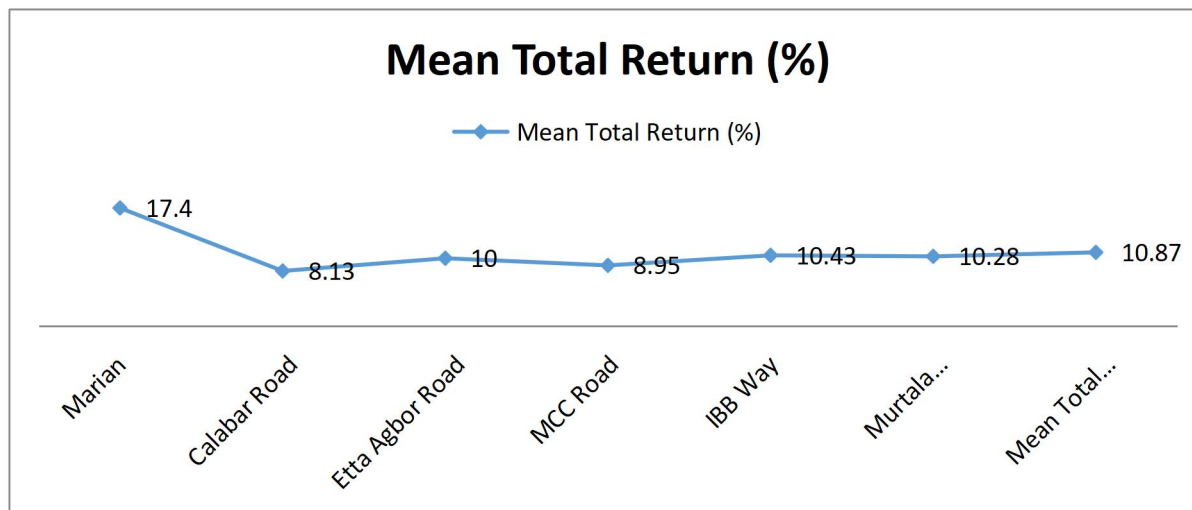
The table and graph above shows the mean total return of six neighbourhoods for shops in Calabar metropolis. From the above, Marian has the highest mean return of 14.40% followed by MCC Road with mean return of 12.93%, followed by Etta Agbor Road with

11.76% mean return, next is Murtala Muhammad Highway with mean return of 11.13% while the least mean returns were observed in Calabar Road and IBB Way with 9.7% and 8.05% respectively.

Table 4.1.6: Mean (Average) Total Return of Office Real Estate Investment in Calabar

Location	Mean Total Return (%)
Marian	17.40
Calabar Road	8.13
Etta Agbor Road	10.0
MCC Road	8.95
IBB Way	10.43
Murtala Muhammad Highway	10.28
Mean Total Return for Office	10.87

Source: Field Work, 2019



Source: Field Work, 2019.

The Table and graph above shows the mean total return of six neighbourhoods for Offices in Calabar metropolis. From the above, Marian has the highest mean return of 17.40% followed by IBB Way with mean return of 10.43%, followed by Murtala Muhammad Highway with 10.28% mean return, next is Etta Agbor Road with mean return of 10.0% while the least mean returns were observed in MCC road and Calabar road with 8.95% and 8.13% respectively.

Total returns on investment in commercial real estate do not vary significantly with location and type of real estate. To test this hypothesis, two-way analysis of variance (ANOVA) was carried out with location and type of commercial real estate as factors and total annual returns on investment as dependent variable. The F-ratio was used to test for significance of main and interaction effect. The descriptive statistics of total returns on investment are presented as Table 4.2.1.

4.2 Test of hypotheses
4.2.1 Hypothesis one

Table 4.2.1: Descriptive statistics of total return on investment in commercial real estate: Location by Property Type

Location of commercial real estate	Type of property	N	Mean	Std dev.
Marian Road	Shops	4	14.400	4.535
	Offices	4	17.400	10.335
	Total	8	15.900	7.561
Calabar Road	Shops	4	11.875	1.957
	Offices	4	8.125	3.055
	Total	8	10.000	3.108
Etta Agbor Road	Shops	4	11.775	4.026
	Offices	4	10.000	2.966
	Total	8	10.888	3.408
MCC Road	Shops	4	12.925	7.160
	Offices	4	8.950	3.048
	Total	8	10.938	5.520
IBB-WAY	Shops	4	8.050	2.142
	Offices	4	10.425	6.460
	Total	8	9.238	4.633
Murtala Muhammad Highway	Shops	4	11.125	2.926
	Offices	4	10.775	7.957
	Total	8	10.950	5.492
Total	Shops	24	11.692	4.196
	Offices	24	10.946	6.367
	Total	48	11.319	5.347

The results in Table 4.2.1 show that the mean annual total returns for shops located along Calabar Road ($\bar{x} = 11.875$), Etta Agbor ($\bar{x} = 11.775$), MCC Road ($\bar{x} = 12.925$), and Murtala Muhammad Highway ($\bar{x} = 11.125$) were higher than those on offices within the same locations. Mean annual returns on offices were higher

along Marian Road ($\bar{x} = 17.400$) and IBB way ($\bar{x} = 10.425$) than those of shops within these same locations. On the whole, mean annual returns for shops ($\bar{x} = 11.692$) were higher than that of offices ($\bar{x} = 10.946$).

The two-way ANOVA results are presented in table 4.2.2

Table 4.2.2: Two-Way ANOVA of Total Returns on Real Estate Investment: Location by Type

Source of variation	Sum of squares	Df	Mean square	F-value	P-value
Corrected model	315.761	11	28.706	1.005	.461
Intercept	6149.477	1	6149.477	215.307*	.000
Location	220.207	5	44.041	1.542	.201
Property type	6.675	1	6.675	.234	.632
Location x type	88.879	5	17.776	.622	.684
Error	1028.213	36	28.561		
Total	7493.450	48			
Corrected total	1343.973	47			

R-square = .235 adj. R-square = .001

*Significant at .05 level. $P < .05$.

From Table 4.2.2, the P-values (.461, .201, .632 & .684) associated with the computed F-values (1.005, 1.542, .234 & .622) for corrected model, location, type, and location by type interaction, are all greater than .05. The null hypothesis was therefore not rejected. This means that location and type of commercial real estate have no significant main and interaction influence on the annual total returns on investments.

4.2.2 Hypothesis two

The risk of investment in commercial real estate does not vary significantly with the location and type of property. To test this hypothesis, two-way ANOVA was applied with location and type as factors and risk of investment as the dependent variable, while F-ratio test was used to test for significance. The results of the descriptive statistics are presented in Table 4.2.3 below.

Table 4.2.3: Descriptive statistics of risk of investment in commercial real estate: Location by type

Location of property	Type of property	N		Mean	Std dev.
Marian Road	Shops	1		4.535	4.115
	Offices	1		10.355	
	Total	2		7.445	
Calabar Road	Shops	1		1.957	.776
	Offices	1		3.055	
	Total	2		2.506	
Etta Agbor Road	Shops	1		4.026	.750
	Offices	1		2.966	
	Total	2		3.496	
MCC Road	Shops	1		7.160	2.907
	Offices	1		3.048	
	Total	2		5.104	
IBB-WAY	Shops	1		2.142	3.053
	Offices	1		6.460	
	Total	2		4.301	
MM. High way	Shops	1		2.926	

	Offices	1		7.857	
	Total	2		5.393	3.487
Total	Shops	6		3.791	1.939
	Offices	6		5.624	3.110
	Total	12		4.707	2.650

The results show that the risk of investment in offices is higher than that of shops along Marian Road ($\bar{R} = 10.355$), Calabar Road ($\bar{R} = 3.055$), IBB-way ($\bar{R} = 6.460$), Murtala Muhammad Highway ($\bar{R} = 7.857$) and when

pooled ($\bar{R} = 5.624$). That of shops was higher along Etta Agbor Road ($\bar{R} = 4.026$) and MCC road ($\bar{R} = 7.160$). The results of the ANOVA are presented in table 4.2.4 below.

Table 4.2.4: The two-way ANOVA of risk of investment in commercial real estate: Location by type.

Source of variation	Sum of squares	df	Mean square	F-value	P-value
Corrected model	77232	11	7.021	.925	.255
Intercept	265898	1	265898	35.023*	.000
Location	29197	5	5.839	.769	.298
Property type	10074	1	10.074	1.327	.116
Location x type	37961	5	7.592		
Total	343131	12			
Corrected total	77232	11			

R-square = .114 adj. R-square = .003

*Significant at .05 level. $P < .05$.

The results in Table 4.2.4 show that the P-values (.255, .298, & .116) associated with the computed F-values (.925, .769, & 1.327) for corrected model, location and type of property, are all greater than .05. Consequently, the null hypothesis was not rejected. This means that risk of investment in commercial real estate does not vary significantly with location and type of property. In summary, shops performed more than offices in terms of return and also with a lower risk.

5. Conclusion and recommendations

The study concluded that performance measurement is a very important tool for investment decision making in the real estate investment sector. This study has examined the performance of shop and office real estate investment in terms of total return and risk in Calabar Metropolis, Cross River State, Nigeria

from 2014-2018. The study has shown that in Calabar while both shop and office investments perform well, shops outperformed offices in terms of rate of return during the period of measurement. However, the risks associated with investment in office is higher than that of shop investment in the study area. A risk averse investor will therefore prefer to invest in shops than offices; whereas an investor who is a risk taker will invest in office properties than shop properties not minding the level of risk attached to it. The study recommends that investors should endeavour to study the performance profile of investments before making investment decisions, than just relying on intuitive decision making. Investors should always get advice or opinion from estate surveyors and valuers before going into any investment. It is also recommended that the real

estate investors should be guided by the annual returns of their property investments as well as the risk attached to them to ensure proper analysis of their property investments performance. Investors who already have properties within the study location should at least once in a year ask for a performance measurement of their investment from their property managers so as to know whether or not the objective of their investments is being achieved. It is true that if an investment has performed well in the past, is not a guarantee that it will perform well in the future but since past performance is a basis for future decision, it is recommended that investors seeking to buy property within the study area should consider investing in shops properties. Real estate investment analysts should embark on further research on return and risk for long term periods to provide the much needed data for property performance measurement in Nigeria.

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