

THE TRENDS IN COMMERCIAL PROPERTY VALUES IN AN EMERGING REAL ESTATE MARKET: THE CASE OF IBADAN METROPOLIS, NIGERIA

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PURPOSE: This study aims at examining the trends in commercial property's rental, capital and returns values from 2002 to 2014 in Ibadan metropolis, Nigeria with a view to providing information for investment decision making.

DESIGN/METHODOLOGY/APPROACH: Questionnaire survey was conducted to collect data on rental and capital values from investments in commercial properties in Ibadan metropolis. The data were collected from partners/branch managers of Estate Surveying and Valuation Firms in the study area. There were 56 estate surveying and valuation firms in Ibadan with an average of 2,072 commercial properties in their management portfolios (an average of 37 properties in each management portfolio). A total enumeration of the 56 firms was conducted using structured questionnaire; however, only 31 questionnaires were completed and returned for analysis (representing 55% response rate). Descriptive statistics was used in analysis of the data obtained, hence the use of frequencies; percentages; income, capital and total returns formulae; weighted mean; growth rate formulae and trend analysis.

FINDINGS: The study found that there was a steady and continuous increase in both the rental and capital values of the selected property types throughout the study period. This was depicted by the trendlines generated from data obtained from the field as well as the annual average growth rates calculated (8.35%, 8.1%, 10.3% and 6.3% for office rental values, shop rental values, office capital values and shop capital values respectively). The income, capital and total returns for investments in office property type were observed to have an average of 4.40%, 6.58% and 10.98% respectively. Similarly, the average income, capital and total returns on investments in shop property type were seen to be 4.62%, 5.19% and 9.82% respectively. The income, capital and total returns values indicated positive returns values for both office and shop properties throughout the study period.

PRACTICAL IMPLICATIONS: Due to the dynamism and property market immaturity associated with emerging property markets of developing nations, investors may want to ascertain the trends of returns behavior of real estate investments so as to serve as a guide for their investment decision making, hence this study.

ORIGINALITY/VALUE: This study is unique as it gathered historical data on commercial property investments behaviour and made future forecast or predictions of possible investment behaviour of returns values in an emerging property market which could serve as a guide to property investors in making investment decisions.

Keywords: Emerging property market, investment, returns, trends, property values.

1. Introduction

Mueller (1999) posited that “real estate trend is a term used to describe any pattern or change in the general direction of real estate returns”. The author further pointed out that this pattern must be based on two critical factors which are: fact and a series covering a specified period of time causing a statistically noticeable pattern of change. Changes in real estate returns are an important factor for investors when making investment decisions. It is obvious that rational investors will only seek to invest on assets with strong historical positive returns which poses potentials for positive flow of future stream of returns (Kloosterman, 2009; Leung, 2010; Ankeli, Dabara, and Okunola, 2013; Dabara, 2015). Hence, the examination of the historical trends and predictive trends of such investment asset(s) is/are imperative before a prudent investor proceed to invest in such asset(s).

An investment is ‘expenditure in cash or its equivalent during one or more time periods in anticipation of enjoying a net inflow of cash or its equivalent in some future time period or periods’ (Koen and Monique, 2010). Evaluation of the performance of investment asset classes over a period of time should be a prerequisite for investors before investing to avoid loss (Fatoki, et al., 2010). Such performance evaluation will show the past performance of such asset and the possible forecast or future performance which will in turn help in the identification of relatively superior assets from various alternatives, keeping in mind that investors have only a limited available resources which must be protected from loss (Ballantine and Stray, 1998; Fatoki et al, 2010). The dynamism and property market immaturity associated with emerging property markets of developing nations like Nigeria, brought about the need for investors to first ascertain the trends in returns behavior of real estate investments so as to serve as a guide for their investment decision making.

Iroham, et al., (2014) asserted that the importance of real estate in the investment sector cannot be overemphasized as it can be related to three different factors namely: factor of production; as a financial asset and as an investment medium. Similarly, movements in real estate returns have a great economic impact on investment funds (Iroham, et al.). Distinguishing the trends in real estate returns from several year cycles around that trend is very important for investment decision making. Despite the importance of real estate’ trend variation in real estate prices, for investment decisions, only a handful of studies have been conducted in emerging markets like Nigeria.

Earlier works on values and trends in property markets which forms the theoretical framework for subsequent studies included the pioneering work of Johann Heinrich Von Thunen, introduced the theory of agricultural location in a study titled “Der isolierte Staat in 1826” (the isolated state). Hoyt, (1939), Burgess (1925), Harris and Ullman (1945), Ratcliffe (1949), Alonso (1964), among others subsequently presented basic theories upon which modern real estate value trends are based. From literature, it was observed that the factors influencing changes in rental and capital values/trends which subsequently impacts on the return behaviour of real estate investments included: accessibility, location, inflation rate, housing and infrastruc-

tural facilities, neighbourhood and physical characteristics etc (Marco, 2005; Leung, Chow and Han, 2008; Odu, 2011; Akinsola, 2012; Oluwasegun et. al, 2013; Dabara et. al. 2014, Dabara, 2015).

In a bid to provide vital investment information to guide investors in channelling their investable funds to viable and profitable asset classes in an emerging property market, this study aims at examining the trends in commercial property's rental, capital and returns values from 2002 to 2014 in Ibadan metropolis with a view to providing information for investment decision making. To this end, the researchers seek to find answers to the following questions: What was the rental and capital values of commercial properties in Ibadan metropolis from 2002 to 2014? What was the trend in the investment returns from commercial properties in the study area within the study period? What is the predictive returns behaviour of investments in commercial properties in the study area over the next three years (2015 to 2017)? And which of these property types had the highest returns over the study period? The remaining part of the paper is presented as follows: the next section presented the review of related literature; section three presented the methodology adopted for the study, results and discussion was presented in section four and the paper closes with a summary of findings and conclusion.

2. Literature Review

Several studies have been conducted with respect to real estate value trends in both developed and developing economies spanning and covering periods of economic booms and busts. Some of the studies conducted included the study carried out in the United States (US) by Margo (1996); the author found that trends in rental values suggested that rents increased faster than the cost of living index that excludes housing in the US. Mueller (1999) analysed average rental values in the US using descriptive statistical tools. Findings from the study suggested that rental average growth rate in the physical real estate's life cycle at each point in the cycle were statistically different. Bjorklund (1999) examined the rental trend in residential properties in Stockholm. The study period under review covered from 1990 to 1997 (a period covering eight years). The methodology adopted involved the use of descriptive statistical tools. Findings from the study revealed that rent kept increasing over the study period. This is congruent with the findings of Dabara (2015). A similar study conducted in Ireland was also found to be consistent with the findings of both Bjorklund (1999) and Dabara (2015).

Davis and Heathcote (2007) asserted that swings in residential land prices are the reason for most of the variation in the trend of house prices in the US from 1975-2006. Briggs & Tim (2009) in an exploratory study decomposed the history of New Zealand' house price movements into a trend and a cyclical component. The authors used a cointegration model in analysis of the data used in the study. Results from the study suggested that residential construction prices have grown strongly over the study period, driving up the cost of new housing substantially. Nicholas and Scherbina (2013) constructed market-based real estate price indexes for Manhattan from 1920 to 1939 clearly presenting the real estate trends and cycles for the study period.

Findings from the study revealed that the value of high-end properties strongly co-moved with the stock market within the study period. Iroham, et al. (2013) carried out a similar study in Nigeria which assessed the trend in rental values of commercial properties in Akure, Nigeria. The authors collected data from estate surveying firms in the study area from 2006 to 2011. The methodology used in the study included the use of simple linear regression and Analysis of Variance (ANOVA). Findings from the study indicated that rental values kept increasing consistently throughout the study period.

Dabara et, al. (2014) compared the risk-return characteristics of commercial real estate investments in Osogbo, Nigeria. Data from 2002 to 2014 were collected and analysed by the authors using trend analysis and holding period formulae. Findings from the study revealed that the rental/capital values as well as the income, capital and holding period returns obtained from investments in shop and office property types in Osogbo metropolis kept increasing over the study period. Dabara (2015) carried out a study which presented the trends in residential properties in Gombe, Nigeria. The author used both trend analysis and a regression model in analysis of data used for the study. The study collected data from estate firms in the study area from 2002 to 2014. Findings from the study suggested that there was a consistent increase in the rental, capital and return values of residential properties in the study area within the study period.

3. Methodology

Primary data required for this study was obtained through questionnaire survey. The questionnaire was designed in such a way as to elicit for information on the average capital and rental values of selected commercial properties (per square meter) in Dugbe, Challenge area, Okebola area, Ring road and Mokola/Sango areas of Ibadan metropolis between 2002 and 2014. The capital and rental values of shop and office property types were collected from partners/branch managers who are registered estate surveyors and valuers, through a total enumeration survey of all the 56 private practicing Estate Surveying and Valuation firms in Ibadan metropolis (this is because the Estate Surveyors and Valuers are the only professionals in Nigeria that are empowered by the law i.e Decree No 24 of 1975 to determine the value of properties and their interest). The sample size was considered adequate by the researchers because it's the aggregate averages of all the respondents' responses per square meter that was used for analysis in this study. The 56 estate surveying and valuation firms in Ibadan had an average of 2,072 commercial properties in their management portfolios (an average of 37 properties in each management portfolio). A total enumeration of the 56 firms was conducted using structured questionnaire; however, only 31 questionnaires were completed and returned for analysis (representing 55% response rate). Descriptive statistics was used in analysis of the data obtained, hence the use of frequencies; percentages; income, capital and total returns formulae; weighted mean; growth rate formulae and trend analysis.

The income return is expressed as follows

$$IR_t = \frac{NI_t}{CV_{t-1}} \quad (1)$$

Where:

IR_t = income return for period t
 NI_t = Net income received in period t (rent)
 CV_{t-1} = CV at the end of period t-1

The capital return return is expressed as

$$CR_t = \frac{CV_t - CV_{t-1}}{CV_{t-1}} \quad (2)$$

Where:

CR_t = Capital return for period t
 CV_t = CV at the start of measurement period
 CV_{t-1} = CV at the end of period t-1

The total return is expressed as

$$TR = \frac{CV_t - CV_{t-1} + NI}{CV_{t-1}} \quad (3)$$

Where

TR = Total return
 CV_t = Capital value of direct property at the beginning
 CV_{t-1} = Capital value of direct property at the end
NI = Income of direct property received during the holding period

Furthermore, the researcher analysed the basic characteristics of rental and capital values as well as investment returns (income, capital and total returns) from Office spaces/shops in the study area. Hence the researcher used the following:

MEAN: The arithmetic mean of the returns obtained from office spaces and shops in the study area were used to determine the mean return values of the property types in question in order to ascertain their return profiles as well as to compare the returns obtained from the two property types in the study area.

TREND ANALYSIS: Trendlines were used to graphically display trends in the data sets (rental, capital and returns) used for this study to help analyze problem of future predictions. Also, the moving average of the trendline was used to smooth out fluctuations in the data and show the pattern or trend more clearly. The R2 value

was used to determine the reliability of the trend and the accuracy of the forecast or predictions made. A trendline is said to be most accurate when its R-Squared value is at or near 1(Margo, 1996). Similarly, least square linear regression equations were generated for prediction of future rental, capital and returns values. These are the equations of a straight line that best fits the points on the chart. The method used to determine these equations involves finding the line that produces the least value for the sum of the squares of the vertical differences between data points and the line. The equation is in the form:

$$y = mx + b \quad (4)$$

where:

y is the dependent variable (rental, capital or returns values as the case may be)

m is the slope of the line, which equals the change in the y value divided by the change in the x value;

x is the dependent variable (year in this case); and

b is the y-axis intercept of the line.

4. Results and Discussions

Data on rental and capital values of office and shop properties in Ibadan metropolis for the period from 2002 to 2014 were obtained from the records of Estate Surveying and Valuation Firms in the study area. The data was collected from the respective partners/branch managers of the Estate Surveying and Valuation Firms using a structured questionnaire. Table 1 presented the respondents profile; this is to establish the validity and reliability of the data obtained for the study.

Table 1: Respondents profile

Profile	Item	Frequency	Percentage
Position held in the firm	principal partner	8	26
	associate partner	7	23
	branch manager	16	51
	head of Department	0	0
	Total	31	100
educational qualification	ND	1	3
	HND	13	42
	B.Sc/B. Tech	12	39
	MSc/M. Tech	4	13
	PhD	1	3
	Total	31	100
professional qualification	FNIVS	1	3
	ANIVS/RSV	14	45
	ANIVS	10	32
	Probationer	6	20
	Total	31	100
years of practice	1-11yrs	16	52
	12-21yrs	13	42
	22-31yrs	1	3
	above 31yrs	1	3
	Total	31	100

Source: Authors' field survey, 2015

Table 1 presented the profile of the respondents who supplied data on rental and capital values in terms of their: position in the Estate Firm, educational qualification, professional qualification and years of professional practice as Estate Surveyors and Valuers. This was done in order to ascertain the validity and reliability of the data collected for the study. With respect to the position of the respondents, 51% of the respondents were branch managers of the estate firms while 49% were either principal or associate partners of the respective firms. It was observed that all the respondents held high positions in their respective firms this gives more credence to the validity and reliability of the data provided.

Similarly, the respondents of this study were all graduates of Estate Management with different educational qualifications. The highest total percentage of respondents is 42% representing HND certificate holders, closely followed by 39% representing B.Sc/B. Tech. certificate holders. Both ND and PhD certificate holders are represented by 3% each. All the respondents are either University or Polytechnic graduates and therefore are academically qualified to respond adequately to the questionnaire. Furthermore, the respondents for this study were in different cadre of professional membership of the Nigerian Institution of Estate Surveyors and Valuers (NIESV). Their distribution is presented between Fellows (FNIVS), Associates registered with ESVARBON (ANIVS/RSV), Associates that are yet to register with ESVARBON (ANIVS) and Probationers. From Table 1, a total of 3% of the respondents are Fellows, 45% are Associate members registered with ESVARBON, 32% are Associate members yet to register with ESVARBON and a total of 20% are Probationers. All the respondents are professionally qualified to respond adequately to the questionnaire. Finally, the years of professional practice of the respondents which is synonymous with their years of experience in the property market and could thus determine the reliability of the data provided for this study was also examined. Table 1 showed that a total of 52% of the respondents have been in practice for between 1 to 11 years; 42% have been practising for between 12 and 21 years; 3% have been practicing for between 22 and 31 years and above 31 years respectively. Most of the respondents have more than ten years' experience which suggests that they have enough practical experience and exposure to provide reliable data for the study. Thus the respondents were found to be academically and professionally qualified to supply valid, credible and reliable data for this study. The data collected were presented and analyzed in the subsequent Tables. Tables 2 and 3 presented the average rental and capital values of office and shop properties in prime locations (Dugbe axis, Challenge area, Okebola area, Ring road and Mokola/Sango axis) of the study area, while Table 4 presented their respective growth rates.

Table 2: Average Rental Values in ₦ (per m²) of Office and Shop properties in Ibadan from 2002 to 2014

Property	Year												
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Offices													
Location													
Dugbe Axis	2787	2981	3201	3472	4028	4232	4528	5415	6241	6289	6725	6987	7866
Challenge Area	2578	2703	2949	3081	3570	3702	3709	3905	4571	4895	5032	5344	5876
Okebola Area	1989	2078	2181	2262	2983	3119	3439	4016	4382	5389	5403	5786	6008
Ring Road	2234	2430	2672	2771	3282	3556	3942	4522	4883	4987	5008	5322	5677
Mokola/Sango	2098	2105	2386	2401	2502	2760	3023	3456	3957	4039	4568	4876	4900
Average	2337	2459	2678	2797	3273	3474	3728	4263	4807	5120	5347	5663	6065
Shops													
Dugbe Axis	1987	2051	2911	3015	3987	4115	4481	5003	5256	6105	6386	6544	6741
Challenge Area	1878	1978	2835	2986	3457	3681	3857	4708	4775	4895	5003	5532	5643
Okebola Area	1790	1832	2051	2068	2783	3011	3213	4011	4432	4938	4987	5087	5365
Ring Road	1987	2041	2158	2621	2989	3152	3412	3566	3987	4112	4312	4532	4876
Mokola/Sango	1789	1895	2138	2178	2422	2567	4001	4849	5112	5980	5993	6007	6342
Average	1886	1959	2419	2574	3128	3305	3793	4427	4712	5206	5336	5540	5793

Source: Authors' Field Survey, 2015

Table 3: Average Capital Values in ₦ (per m²) of Office and Shop properties in Ibadan from 2002 to 2014

Property Type	Property Location	Year													
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Offices															
	Dugbe Axis	97300	98324	98829	109578	117631	132356	140256	153821	171839	182993	192358	200987	256089	300318
	Challenge Area	81190	81223	85952	87893	89059	107330	108529	113534	113987	114836	114932	114997	136753	158765
	Okebola Area	38700	39876	40835	42587	44675	52031	54890	60750	70811	80256	86135	86435	89766	98675
	Ring Road	52000	52786	54895	57511	58976	60300	65312	70811	73008	75012	79865	80531	82665	85765
	Mokola/Sango	45620	46897	49893	51355	60123	65434	70518	71826	73887	74111	74899	75015	78665	79007
	Average	62962	63821	66081	69785	74093	83494	87901	94148	100706	105446	109638	111593	128788	144550
Shops															
	Dugbe Axis	87500	87675	89351	99750	101239	129582	139256	140931	146892	147661	148213	149983	165434	187554
	Challenge Area	75015	75434	79582	80251	85113	97135	101321	110321	112051	113568	114087	114321	144387	150098
	Okebola Area	35500	35787	38725	39959	41358	42789	48759	50230	51781	56782	60786	63835	65223	67559
	Ring Road	47400	47688	49351	52781	53992	60112	63323	69753	70532	71001	71443	71981	72998	75098
	Mokola/Sango	49570	49878	51891	52358	54883	60859	69701	71811	75677	75987	78001	78957	80997	81541
	Average	58997	59292	61780	65020	67317	78095	84472	88609	91387	93000	94506	95815	105808	112550

Source: Authors' Field Survey, 2015

Table 4: Growth rates for rental and capital values of office and shop properties in Ibadan

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Average
Rental Values (Offices)	12.2	12.2	11.5	11.7	9.4	9.3	8.5	7.1	5.2	4.6	4.5	3.5	8.31
Rental Values (Shops)	15.9	16.3	12.7	12.5	9.5	9.4	7.5	5.1	4.6	2.8	2.9	2.3	8.5
Capital Values (Offices)	10	10.5	10.8	10.7	10.6	9.1	9.2	8.9	8.7	9.3	10.6	14.8	10.3
Capital Values (Shops)	7.5	7.5	7.3	7.5	5.5	4.8	4.5	4.6	5.2	6.4	8.7	6.4	6.3

Source: Analysis of survey data, 2015

The rental values in Table 2 were arrived at by calculating for each year respectively, the aggregate total averages of all the respondents' responses in the study area per meter square. For both office and shop property type, the rental values were observed to be highest in Dugbe axis and lowest in Okebola area. Table 2 showed that there was a gradual but consistent increase in the rental values of commercial properties from 2002 to 2014. This was indicated by an average annual growth rate of 8.31% and 8.5% for office and shop properties respectively (see Table 4). The consistent increase might not be unconnected to rise in inflation, location of the properties (prime commercial area of Ibadan metropolis) etc. This is congruent with the findings of earlier Nigerian studies such as Odu (2011) and Ogunba et al. (2013) which indicated that rental values are rather increasing in Lagos and Ibadan respectively. In the same vein, foreign studies such as Leung (2010) in Australia and Zhe (2010) in Hong-Kong also asserted that rental values in the respective study locations kept increasing within the respective study periods.

By the same token, the capital values presented in Table 3 were also arrived at by calculating for each year respectively, the aggregate total averages of all the respondents' responses in the study areas per meter square. As was observed from the rental values, the capital values of commercial properties in the metropolis were also seen to be higher in office properties than in shop properties. The highest average capital values obtained (₦300,318 and ₦187,554 per m²) was recorded in Dugbe axis for office property and shop properties respectively in the year 2014. The lowest capital values obtained (₦38,700 and ₦35,500 per m²) was recorded in Okebola area for both office and shop properties respectively in the year 2001. Table 3 also indicated a gradual but consistent increase in the capital values of both office and shop properties from 2001 to 2014. This was similarly indicated by an average annual growth rate of 10.3% and 6.3% for office and shop properties respectively (see Table 4). It was observed that commercial properties as seen from Table 3 have kept appreciating over time. This is consistent with what was found in Akure metropolis and some earlier Nigerian studies such as Ogunba et al. (2013) and Dabara et al. (2014).

The Trend analysis of both rental and capital values for office and shop properties in the study area were presented in Figure 1 and 2.

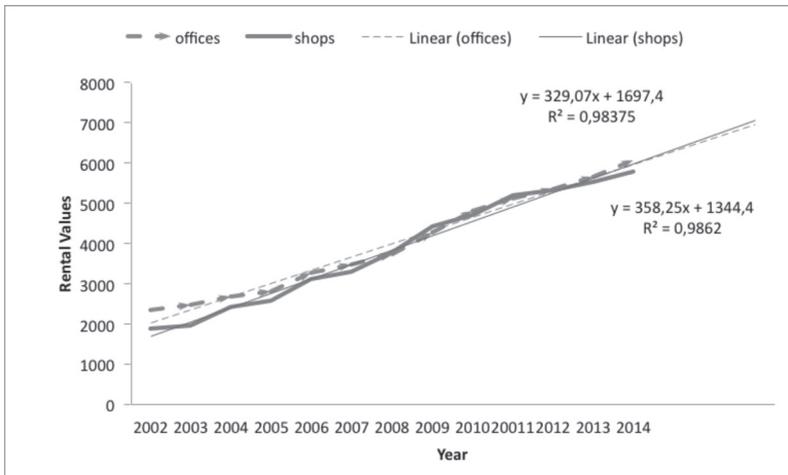


Figure 1: Trend analysis of rental values in Ibadan from 2002 to 2014.

In Figure 1, the rental values of office property type were observed to have kept increasing gradually from 2002 to 2014. Similarly, the rental values of shop property type were also observed to maintain a consistent and gradual increase from 2002 to 2014. For comparative purposes, it was observed that the rental values of office property kept increasing at a better growth rate than the shop property type (see Table 4). It is obvious that the growth rate of both property types over the study period could be attributed to the regular rent reviews undertaken by property investors in the study area.

The trendlines indicated a consistent and steady increase for both office and shop property types from 2002 to 2014. From the trendlines, a future forecast or prediction with respect to rental values of commercial properties in the study area for additional three years from 2014 was made (i.e 2015 to 2017). The analysis indicated continues steady increase of rental values for both office and shop properties for the next three years with the shop property type exhibiting a better growth rate. The level of reliability of the trend and accuracy of the forecast or predictions as determined by the R2 value for both property types is as follows: For the office property, the level of reliability and accuracy of the forecast is 98.37%, while that of the shop property type is 98.62%. The least square regression equation in the analysis can be used to generate rental values in the study area for years beyond the study period for the purpose of forecast or predictions. 'Y' in the equation represents rental values in Ibadan while 'X' represent the year selected for the desired analysis. From the least square regression of office properties in the study area, the trend slope and intercept were seen to be 329.07 and 1697.4 respectively. While the shop properties' least squares for trend slope and intercept were seen to be 358.25 and 1344.4 respectively. From the analysis above, it can be inferred that rental values of office and shop properties in the study area had a steady and consistent growth rate over the study period and this growth rate is likely to be maintained over the next three years as seen from the predictive trendlines.

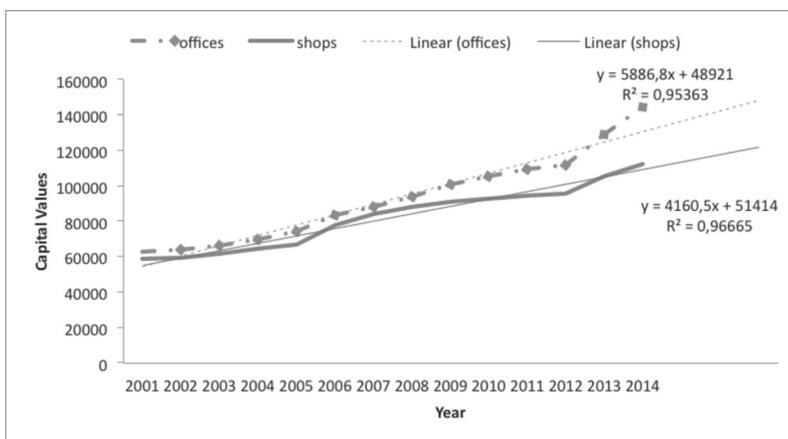


Figure 2: Trend analysis of capital values in Ibadan from 2002 to 2014.

In Figure 2, the capital values of office properties in the study area increased steadily from 2001 to 2014. Similarly the capital values of shop properties was also observed to increase consistently from 2002 to 2014, it was however observed that there was a sharp increase between 2005 and 2006 which was maintained to 2012.

For both property types, the trendlines indicated a consistent and steady increase from 2002 to 2010. The office property type indicated a better growth rate than the shop property type throughout the study period. A future forecast with respect to the capital values of commercial properties in the study area for additional three years from 2014 was also made. The analysis indicated continues steady increase of capital values for both office and shop properties for the next three years with the office property type exhibiting a better growth rate (also see Table 4). The level of reliability of the trend and accuracy of the forecast as determined by the R2 value for both property types is as follows: For the office property, the level of reliability and accuracy of the forecast is 95.36%, while that of the shop property type is 96.67%. The least square regression equation in the analysis can also be used to generate capital values in the study area for years beyond the study period for the purpose of forecast or predictions. 'Y' in the equation represents capital values in the study area while 'X' represent the year selected for the desired analysis. From the least square regression of office properties in the study area, the trend slope and intercept were seen to be 5886.8 and 48921 respectively. While the shop properties' least squares for trend slope and intercept were seen to be 4160.5 and 51414 respectively. From the analysis above, it can be inferred that capital values of office and shop properties in the study area had like the rental values also had a steady and consistent growth rate over the study period and this growth rate is likely to be maintained over the next three years as seen from the predictive trendlines. This is congruent with the study carried out by Zhou and Clements (2010).

Table 5 presented the income, capital and total returns of investments in both office

and shop properties accordingly. These were calculated from both the rental and capital values (presented in Tables 1 and 2) using Equations 1, 2 and 3 respectively.

Table 5: Income, Capital and Total returns from office and shop property investments in Ibadan metropolis

Year	Income Returns		Capital Returns		Total Returns	
	offices	shops	offices	shops	offices	shops
2002	3.66	3.19	1.35	0.50	5.01	3.69
2003	3.85	3.30	3.54	4.21	7.39	7.51
2004	4.05	3.92	5.61	5.24	9.66	9.16
2005	4.01	3.96	6.17	3.53	10.18	7.49
2006	4.42	4.65	12.69	16.01	17.11	20.66
2007	4.16	4.23	5.28	8.18	9.44	12.41
2008	4.24	4.49	7.11	4.90	11.35	9.39
2009	4.53	5.00	6.97	3.15	11.49	8.13
2010	4.77	5.16	4.71	1.76	9.48	6.92
2011	4.86	5.60	3.63	1.62	8.49	7.22
2012	4.88	5.51	1.78	1.52	6.66	7.03
2013	5.10	5.78	14.41	10.43	19.51	16.21
2014	4.71	5.48	12.24	6.37	16.95	11.85
Average	4.40	4.62	6.58	5.19	10.98	9.82

Source: Analysis of survey data, 2015

From Table 5, the income, capital and total returns for investments in office property type were observed to have an average of 4.40%, 6.58% and 10.98% respectively. Similarly, the average income, capital and total returns on investments in shop property type were seen to be 4.62%, 5.19% and 9.82% respectively. It is also important to note that all the return values are positive suggesting that investments in both office and shop property types in the study area are likely to be profitable for investors this is congruent with the findings of Bello (2004), Zhe (2010) and Park and Bang (2012).

Figures 3, 4 and 5 presented the Trend analysis of the income, capital and total returns on office and shop property investments in the study area.

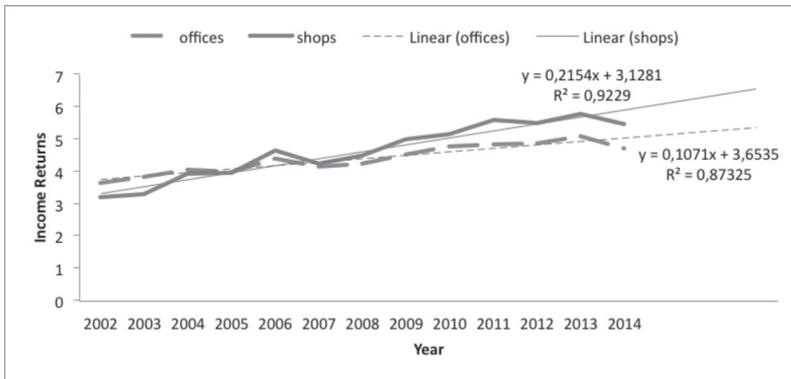


Figure 3: Trend analysis of income returns for commercial properties in Ibadan from 2002 to 2014.

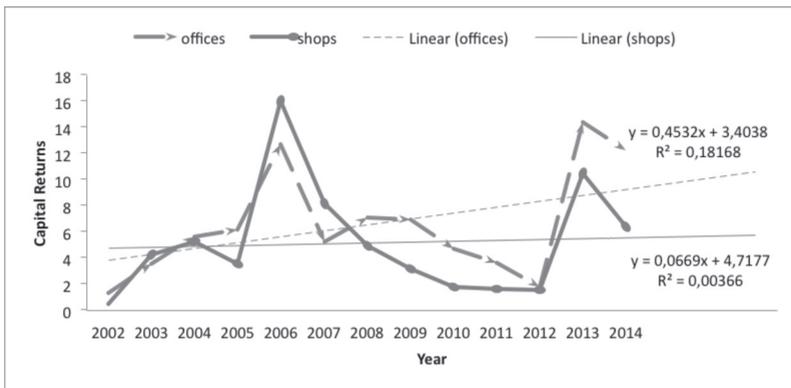


Figure 4: Trend analysis of capital returns for commercial properties in Ibadan from 2002 to 2014.

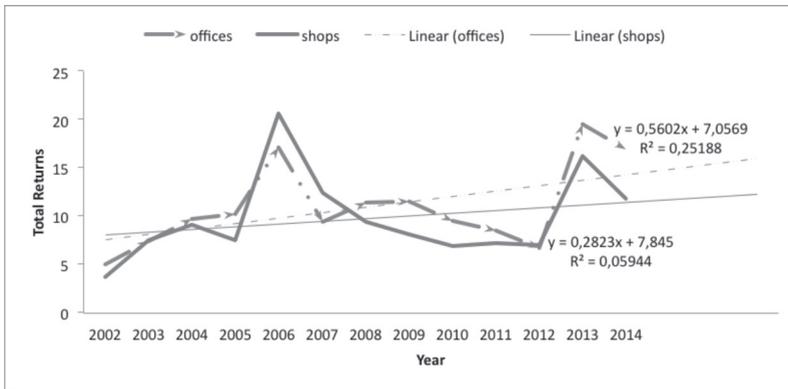


Figure 5: Trend analysis of total returns for commercial properties in Ibadan from 2002 to 2014.

From Figures 1, 2 and 3, all the property types for all the returns components (income, capital and total returns) showed a gradual and consistent increase on their returns values from 2002 to 2014 with different levels of volatility. This increase could be as a result of the following factors: accessibility, location, inflation rate, housing and infrastructural facilities. The capital returns indicated the highest level of volatility when compared to both the income and total returns. The income returns on the other hand showed the lowest level of volatility. The trend analysis suggested that investment in office properties provides a higher return than shop properties for both the capital and total returns while investments in shop properties provided higher returns for the income returns in the study area. For the purpose of future predictions, the ordinary least square regression equations were generated. On the equations 'Y' represents the rate of returns while 'X' represents the year to be considered for future prediction of returns behaviour.

Future forecast with respect to the returns values of commercial properties in the study areas for additional three years from 2014 indicated continues steady increase of the income, capital and total returns for both office and shop properties. The level of reliability of the trend and accuracy of the forecast as determined by the R2 value for both property types with respect to the three returns components is as follows: For the office properties, the level of reliability and accuracy of the forecast were 87.33%, 18.17% and 25.19% for the income, capital and total returns respectively. While that of the shop property type were 92.29%, 00.37% and 5.947% for the income, capital and total returns respectively. The least square regression equations in the analysis were used to generate returns values in the study areas for additional three years beyond the study period for the purpose of forecast or predictions. From the least square regressions of office properties in the study area, the trend slopes and intercepts were seen to be 0.2154 and 3.1281; 0.4532 and 3.4038; and 0.5602 and 7.0569 for the income, capital and total returns respectively. Similarly, the trend slopes and intercepts for shop properties were seen to be 0.1071 and 3.6535; 0.0669

and 4.7177; and 0.2823 and 7.845 for the income, capital and total returns respectively. From the analysis above, it can be inferred that the returns values of office and shop properties in the study area had a steady and consistent increase over the study period and this increase is likely to be maintained over the next three years as seen from the predictive trendlines. This is consistent with what was observed in rental and capital values of commercial properties in the study area

Summary of Findings and Conclusion

This study examined the trends in office and shop property's rental, capital and returns (income, capital and total) values from 2002 to 2014 in Ibadan property market. It was observed that the dynamism and property market immaturity associated with emerging property markets may prompt investors to want to ascertain the trends of income behavior of real estate investments so as to be properly guided in making investment decisions. The study found that there was a steady and continuous increase in both the rental and capital values of the selected property types in the study area. This was depicted by the trendlines generated from data obtained from the field as well as the annual average growth rate calculated. Similarly, the income, capital and total returns values indicated positive returns values for both office and shop properties throughout the study period. However, there were certain degrees of volatility with the capital returns demonstrating the highest level of volatility. The information provided in this study can provide a basis for investors to make informed decision with respect to real estate investments in an emerging property markets in general and in Ibadan, Nigeria in particular.

References

- Akinsola, B. N. (2012). Comparative analysis of commercial property and stock-market investments in Nigeria *World Academy of Science, Engineering and Technology* (70), 1143-1151. Retrieved from <https://www.waset.org/journals/waset/v70/v70-212.pdf>
- Alonso, W. (1946). *Location and land use towards a general theory of land rent*. U.S.A: Harvard University Press.
- Ankeli, I. A., Dabara, I. D. & Okunola, A. S. (2013). *The estate management handbook*. Ibadan, ASEDA.
- Ballantine J. & Stray S. (1998). Financial appraisal and the ICT investment decision making process. *Journal of Information Technology*, 14, pp. 3-15.
- Bello, M. O. (2004). The inflation hedging characteristics of Nigerian residential property investment. *Journal of Property Research and Construction*. 1(1), 40-52
- Briggs, P., & Tim, N. (2009). Trends and cycles in New Zealand house prices. Paper for CHRANZ workshop on 9 July 2009. Retrieved from <http://www.chranz.co.nz/pdfs/rbnz-trends-and-cycles-in-new-zealand-house-prices.pdf>
- Burgess, E. W. (1925). The growth of the city, in: E.W. Burgess, R. E. Park & R. I. Mackenzie (ed). *The city* (Chicago: University of Chicago Press) 47-62.

- Dabara, I. D. (2015). The inflation-hedging performance and risk-return characteristics of residential property investments in Gombe, Nigeria. *Advances in Research Journal*. 3(1), 71-83. Retrieved from http://www.sciencedomain.org/abstract.php?iid=645&id=31&aid=6249#VDgdp1f_afU
- Dabara, I. D., Ankeli I. A., Odewande, A. G., Guyimu, J., & Adeleke, M. A. (2014). Comparative analysis of the risk-return characteristics of office and shop property investments in Osogbo, Nigeria. *European Journal of Business and Management*. 6(29), 177-186. Retrieved from <http://www.iiste.org/Journals/index.php/EJBM/article/view/16091>
- Davis, M. A., & Heathcote, J. (2007). "The Price and Quantity of Residential Land in the United States." *Journal of Monetary Economics* 54(8): 2595-2620.
- Fatoki, O., Okubena, O. & Herbst, G. (2010). An investigation into the impact of investment appraisal techniques on the profitability of small manufacturing firms in the Nelson Mandela Bay Metropolitan Area, South Africa. *African Journal of Business Management* 4(7), 1274-1280. Retrieved from: <http://www.academicjournals.org/ajbm/PDF/pdf2010/4July/Olawale%20et%20al%20202.pdf>
- Harris, C. A., & Ullman, E. L. (1945). *The nature of cities*. Journal of the American cities. Washington: Federal Housing administration.
- Kloosterman, R. M. (2009). The Inflation-hedging characteristics of real estate investment trusts. Master thesis submitted to Department of Finance, Erasmus Universiteit Rotterdam. Retrieved from <http://oaithesis.eur.nl/ir/repub/asset/5361/306020kloostermanma0609.pdf>
- Koen, M., Monique, S., Raf, H. (2010). Evaluation of the applicability of investment appraisal techniques for assessing the business value of IS services. Retrieved from: https://lirias.kuleuven.be/bitstream/123456789/247210/1/KBI_0910.pdf
- Leung, A. (2010). Commercial property as an inflation hedge: an Australian perspective. *Pacific Rim Research Property Journal* 16 (1) 97-115.
- Leung, F., Chow, K. and Han, G. (2008) Long-Term and Short-Term Determinants of Property Prices in Hong Kong, Working paper Hong Kong Monetary Authority, October 2008.
- Marco, L. (2005) Determinants of New York City Residential Rental Prices *The Michigan Journal of Business*, 3(2), 61-83.
- Margo, R.A. (1996). The Rental Price of Housing in New York City, 1830–1860. *Journal of Economic History*(56), 605–625.
- Mueller, G. R. (1999). Real Estate Rental Growth Rates at Different Points in the Physical Market cycle, *Journal of Real Estate Research* 18 (1), 131-150
- Nicholas, T., & Scherbina, A. (2013). Real estate prices during the roaring twenties and the great depression. *Real Estate Economics*, 41(2), 278-309. Retrieved from http://www.people.hbs.edu/tnicholas/anna_tom.pdf
- Odu, T. (2011). Analysis of relative inflation hedging capacities of prime commercial properties in Lagos. *Global Journal of Human Social Science*. 11(10) 42-51. Retrieved from: https://globaljournals.org/GJHSS_Volume11/8-An-Analysis-of-Relative-Inflation-Hedging-Capacities.pdf
- Ogunba, O.A., Obiyomi, O. O. & Dugeri, T. (2013). The inflation hedging potential of commercial property investments in Ibadan, Nigeria In: Laryea, S. and Agyepong, S.

- (Eds) Procs 5th West Africa Built Environment Research (WABER) Conference, 12-14 August 2013, Accra, Ghana, 1101-1111.
- Oluwasegun, A., Okorie, A., Dabara, I.D & Abdulazeez, H.O. (2013). A comparative analysis of the impact of infrastructural facilities on the rental values of residential properties in Osogbo and Ede, Osun state Nigeria. *Journal of Environmental Research and Policies*, 8(2), 52-59.
- Park, Y. W. & Bang, D. W. (2012). Direct commercial real estate as an inflation hedge: Korean evidence. *Journal of Real Estate Portfolio Management*, 18 (2), 187-203.
- Ratcliffe, R. V. (1949). Residential patterns in American cities. University of Chicago, Geography Research paper 189.
- Zhe, L. (2010). Short-term inflation-hedging characteristics of real estate in Hong Kong. A dissertation submitted to the faculty of Architecture for the award of Bachelor of Science in Surveying, The University of Hong Kong. Retrieved from <http://hub.hku.hk/bitstream/10722/130987/1/ft.pdf>
- Zhou, X. & Clements, S. (2010). The inflation hedging ability of real estate in China. *Journal of Estate Portfolio Management*, 16 (3), 267-277.