ASSESSING THE TREND IN RENTAL VALUES OF COMMERCIAL PROPERTIES ALONG OYEMEKUN ROAD, AKURE, NIGERIA

By

Iroham, C. O[1],

Oluwunmi, A. O.[1],

Simon, R. F[1],

&

Akerele, B. A[1].

[1]Department of Estate Management,
Covenant University, Ota Ogun State Nigeria.

osmond.iroham@covenantuniversity.edu.ng
funike.oluwunmi@covenantuniversity.edu.ng
funshosimon@yahoo.com
akerelebeatrice@yahoo.com

Abstract: Commercial property investment which is now very evident along Oyemekun Road, Akure, Nigeria, a place characterized hither to by residential development, leaves investors at dark with the choice of commercial property investment. Commercial properties evident in the study area are purpose-built office space, converted office space and shopping complex. In a bid to lead investors aright on the best decision of the type of property to invest their hard earned income in, a study was conducted to assess the trends in rental values of the properties between 2006 and 2011 in order to discover the property with the highest trend. This study which is a cross-sectional research that entailed the survey of the entire 22 Estate Surveying Firms in the study area made use of questionnaires as the primary source of data. The use of both descriptive and inferential statistical techniques such as the frequency distribution table and the simple linear regression, and Analysis of Variance (ANOVA) were adopted in analysing data. From the study it was discovered that the converted office space is mostly predominant (53%) while the shopping complex is the most professionally managed property (46%) respectively. However, the purpose built office space with the highest R^2 of 0.9 and having the highest trend in rental values will result to the fastest recoup of investment. The use of (ANOVA) coupled with Tukey post-hoc test reveal that the rental values of three properties at the 95% confidence level are significantly different (p=0.000). Based on the study findings, it is recommended that the purpose built office space with the highest rent and trend should be the focus of both investors and professional managing agents in order to maximize returns.

Keywords: Rental values, Rental Trends, Commercial Properties, Nigeria.

1. Introduction

Real estate trend is a generic term used to describe any consistent pattern or change in the general direction of the real estate industry, which must be based on fact and, over the course of time, causing a statistically noticeable pattern of change (Mueller, 1999).

This phenomenon can be a result of the economy, a change in mortgage rates, consumer speculations or other fundamental and non-fundamental reasons. A trend can be downward or upward, horizontal or vertical depending on the series of related changes that are identified and projected into a plausible future. When such trends are based on rental values then the observation will be confined to any evident changes in rent patterns. Rents passing on properties are bound to be influenced variedly due to the heterogeneity of real estate. These factors range from intrinsic to extrinsic characteristics. They include closeness to high-rise office buildings (Thibodeau, 1990); accessibility (Ball, Lizieri and MacGregor, 1998); location, size, structural characteristics (Tay, Lau and Leung, 1999; McCluskey, Deddis, Lamont, & Borst, 2000*);* proximity to rail and park (Jensen and Durham, 2003); provision of balconies (Chau, Wong, , and Yiu, 2004); proximity to open space (Anderson and West, 2005); location of dams (Provencher, Sarakinos, and

Meyer,. 2006); the situation of a new sport venue (Dehring*,* Depken*,* and Ward. 2007); distance from foreclosed properties (Lee, 2008); local historic designation (Ijla, 2008); the impact of inflation and real construction cost in the long-run while in the short-run increase in wealth rising from equity price (Leung, Chow and Han, 2008); provision of wall-fence round the building and the installation of burglary proof in all the windows (Olujimi and Bello, 2009); nearness to worship centres' (Iroham, Oloyede and Oluwunmi, 2011) amongst others. Specifically for commercial properties certain factors do abound as revealed in previous studies. Such factors include average floor area and number of rooms (Slade, 2000); changes in floor space and prime lending rates (Chin, 2003); size of sales facility (Kivilahti and Viitanen, 2006); neighborhood and physical characteristics (Marco, 2007). From these backdrops these requisite factors have to be continually evident for properties to keep commanding attractive rents that will generate an impressive trend/pattern from the stance of investors over a given period of time. Rising rents have been described as an attraction for rental real estate development as prospect of rental growth is also an important viability consideration. In addition rental growth rates combined with

occupancy levels are being regarded as major long run determinants of property income (Mueller, 1999).

Changes in rent invariably affect every type of real estate although in varying degrees. It appears that these changes are more evident in commercial properties. This perhaps is due to the fact that these properties are majorly built for business transactions and as the name implies could easily be prone to varying economic warp. Commercial property which could come in form of office space, malls, retail stores, shopping centers, banks amongst others has an important role in real estate markets. Its importance can be related to three different factors: First, as a factor of production, commercial property provides the space to house the activities of business and industry. Second, as a financial asset, commercial property constitutes a significant part within asset markets. Third, as an investment medium, it provides revenues to its holders based on value (Ustaoğlu, 2003). These characteristics make commercial property attractive for investors. Hence, any painstaking process in monitoring rental movements over the years is worth the while.

Perhaps these grandiose attributes commercial properties offer have resulted to a plethora of such investment in Oyemekun

Akure which was hither to sprawl with residential structures. Three types of commercial properties including purpose-built office space, converted office space and shopping complex are evident in the study area. As a fast growing arena for commercial activities investors could be faced with the decision on which of the type of property to invest their hard earned income. This study is thereby geared towards leading investors aright on the best decision of investment to make amongst the three property types for earliest recoupment of investment.

Hence the basic research questions designed are to seek the opinion of respondents through direct statements contained in the questionnaire on certain aspects of the study:

- What are the rental values of the various types of commercial properties along Oyemekun Road, Akure between the years 2006 and 2011?
- What are the trends in the rental values of these properties?
- Which of these properties has the highest trend in rental values over the years?
- Is there any significant difference in the rental values passing on these properties?

15

2. Earlier Works on Trends in Property Values

According to Nwuba (2008), the need to analyse the movement of rents is premised on the fact that it would aid entrepreneurs in their planning and cash flow projections; assist developers in investment decision making; useful to real estate professionals in appraisals and evaluation of proposed development projects; as well as provide information for researchers. A number of studies have been carried out on rental movements. In the United States,

Mueller (1999) using asking rents and average rental growth rate, evaluated rental growth rates in the physical real estate cycle and found that national average growth rates at each point in the cycle were statistically different. Bjorklund (1999) studied residential rent between 1990 and 1997 in Stockholm from an investor's point of view. With the use of rent equations, estimations were conducted to analyse whether or not rent levels varied between locations holding other rent-affecting variables (age and improvement) constant. It was discovered it varies. The study also entailed a comparison between annual increases in the effective rent charged for privately owned residential properties and the official increases set via official negotiation for municipality owned residential housing to see whether excessive

rent increases (indicating rent drift) could be found. Evidence was found to support the existence of such rent drift. This rent drift has also been discovered in commercial real estate rents in similar research conducted in Hong Kong (Brown and Chau, 1997) and Australia (Beer, 1999). However, a later research in Hong Kong, Dahoa (2003), discovered that after a peak reached in 1997 there was a drop of 66.9% and 48.7% respectively in House Price Index and Rental Index respectively. The situation in Scotland is quite different as no regular trend in office rents was observed. However, there were fluctuations particularly between 1987 and 2002 (Langdon and Everest, 2003).

Scott and Judge (2000) examined the cyclical behaviour in commercial property values in the UK between 1956 and 1996 using a structural times series (unobserved components) approach. The study incorporated influence of the transition to short rent reviews during the late 1960s and the short and long-term impacts of the 1974 and 1990 property crashes in the analysis, via dummy variables. It was found that once these variables were taken into account a fairly regular cyclical pattern can be discerned within a period of about 7 to 8 years. Furthermore, the 1974 and 1990 property crashes were shown to have had a major long-term

impact on property value growth (presumably via their influence on investors' expectations).

Shipley (2000) embarked on a research that was designed to examine the assertion that historic designation of properties, under the heritage legislation in Canada's largest province, has a negative impact on the values of those properties. The actual selling price of subject properties was used to establish their value history trends, which were then compared to ambient market trends within the same communities. Almost 3,000 properties in 24 communities were investigated, in what is believed to be the largest study of its kind ever undertaken in North America. It was found that heritage designation could not be shown to have a negative impact. In fact there appeared to be a distinct and generally robust market in designated heritage properties with over 74% of such properties performing well. These heritage properties tend to be resistant to down-turns in the general market as ample numbers of willing buyers were prepared to pay premium for this type of property.

Woods (2007) argued that developments in the commercial property market have greater consequences for the stability of the Irish financial system. This as highlighted by Woods op. cit. may be especially true in the light of international experience regarding recent financial crises in developed economies, the results of stress-testing exercises and the current historically high share of commercial property-related lending to private non-financial corporates. Observation made reveals that over the period 2003 to 2006, there was a large increase in capital values in the Irish commercial property market without a correspondingly large increase in rents. Consequently, income yields on all types of commercial property reached very low levels in 2006. Of additional concern, from a financial stability perspective have been the rapid rates of increase in lending for commercial property-related purposes during the same period. The paper investigated whether these trends were unique to Ireland, and considered the extent to which the growth in commercial property values can be explained by fundamental factors. It addressed these issues by examining recent trends in capital values and income yields on Irish commercial property on a historical and international basis and found that nominal income yields have followed a general downward trend since the mid-1990s.

Hui et al (2008) carried out a research on building and real estate index for the Hong Kong residential property market. The aim of the study was to explore changes in price expectations and

confidence of housing consumers over a period of time, with the primary objective of developing an independent confidence index for residential properties in Hong Kong. The building and real estate index provided an objective resource to forecast market performance. It also provided an objective tool, and a statistical pointer that forecasts future housing price trends.

Jeong and Kim (2009) used a time series analysis and a shock-response analysis of the vector auto regression (VAR) model to find the trends in retail rents in South Korea. The data of retail rent series were compiled by three institutions (the Bank of Korea - BOK, the Kookmin Bank, and the Korea Statistic Office) from January 1995 to February 2008.

The long-term trends in retail rents showed that they continued to rise in general but there was a short sluggish period. The researcher discovered that retail rents had a positive relationship with office rents, property management expenses, consumer price index, and housing deposit-basis lease value (chonsei), but negative relationship with interest rate.

Singh and Komal (2009) in their study of the prospects and problems of real estate in India; surveyed 50 major players in the real estate field. The study focused on commercial real estate investment in India. The principal source of data collection was secondary through newspapers, magazines and internet, supplemented by primary data collection via interviews and making personal visits to the various real estate companies. The study revealed issues concerned with real estate investment in the country considering the past and present trends of rental values. Cities like Delhi, Mumbai and Gurgaon experienced a 20-25% jump in their rental values because of the demand for independent houses by majorly corporate sectors who rent such houses for their senior executives. Even though commercial lease agreements specify a 15% escalation in the real estate rental in every three years, the present cause of real estate boom in India was injection of foreign funds by the government into infrastructures like hotels, shopping malls, large-scale residential complexes in new townships, InfoTech parks and special economic zones in order to attract higher investments. The growth in the real estate sector was discovered to be between 25-30% for residential, 10-15% for commercial and agriculture sectors.

Briggs and Ng (2009) in their study of trends and cycles in New Zealand house prices sought to find the trend level of house prices and identifying the anchor or attractor for house prices, and look

at whether it was possible to identify a long run equation that describes the trend in house prices. The study linked house prices to household income suggesting that other factors besides interest rates such as tax treatment of rental properties and an increase in the proportion of rental properties are also behind the rise in the trend in house prices. Certain factors including increases in section prices and the cost of construction would have an impact on the cost of existing houses as well as new houses. Other factors include increased access to credit following financial deregulation, and a higher propensity on the part of households to borrow.

Wu et al. (2009) used interview data to explore and examine property markets in three Chinese cities with the focus placed on the emergence of the commercial property markets and the government-market interplay, noting the market formation process and cycles that are 'unexpected' in a transitional economy. Interviewees were selected with the intention to cover the core elements of the property submarket. The sampling was not random because the information sought-after was not evenly distributed in the society. A total of 27, 19 and 26 semi-structured interviews were conducted in Guangzhou, Chongqing and Beijing

respectively. Each interview which lasted a minimum of 30 minutes was based on the following research question: to what extent has structural change, caused by the state-led economic transition, affected the performance and the stability of the emerging office market as reflected by market-led cyclical fluctuations? The interview process undertaken between 2004 and 2007 was centered on five themes developed based on the research question: Markets and cycles since the 1990s; what changes have occurred? Information (data) availability and quality; how this was structured? Factors affecting commercial property markets; Government policy and office markets - the analysis: e.g. Market vs. State policy, which one is the main driver? Also there was a search for the future prospect and market maturity. The work identified varying opinions and perceptions among key stake-holders about cycles in China's emerging commercial property markets. Interviews in the three cities suggested a spectrum of factors that may substantially affect the stability of China's office markets.

A cross-sectional comparison of the three cities did reveal a similar pattern of cyclical behaviour highlighting structural change and state intervention with leads-and-lags, in spite of the dispersion in geography, culture and market

maturity. The various views offered about market mechanism and cyclical behaviour represented varying levels of market maturity. These brief insights offer an opportunity to develop an alternative approach to measure property market conditions in emerging or immature markets such as China by looking at market stakeholder perception based on the notion that market can be partially driven based on perception i.e. market are not 100% efficient.

The Nigerian Experience
Although studies on rental trends in Nigeria are relatively sparse, certain contributions need to be acknowledged. Nwuba (2004) in a study involving differences in house rent in various locations in Kaduna between 1986 and 2004 shows the existence of house rent inflation rates which was discovered to be statistically significant amongst these areas. Nwuba and Adeagbo (2007) as a follow-up on this research found a steady rise in house rents index in Kaduna during the same period. In the succeeding year, Nwuba (2008) evaluated office rental movements in the Central Area of Abuja, Nigeria, between year 2000 and year 2007, with a view to measuring the rental growth rates. The basic questions determined were whether the rental growth rates were significant, and whether significant difference exists

between the rental growth rates and CPI inflation rates. The results showed that office rents maintained upward trend during the study period but the growth rates were lower than general inflation rates. Rental growth rates were statistically significant, but no significant difference existed between the growth rates and inflation rates. There was a strong positive linear relationship between time and office rents movement, which could be an indication that office rents grow significantly over time. Also, Idudu (1989) and Omuojune (1994) in related studies on trends in rental values observed that urban rents in Nigeria have maintained upward movements in the previous two decades.

In Ikeja, Lagos State, due to the rate of increase in rental values of commercial properties along each arterial road which has become unpredictable leading to inability of Estate Surveyors and Valuers to accurately predict its trend, Oni (2009) focused on determining spatial distribution and deriving models for predicting the trend of the values. In doing so, data (rental values over a period of 5 years, 2003-2007) were collected by interviewing Estate Surveyors and Valuers and occupiers of commercial properties in the study area, analyzed using polynomial regression models and spatial distribution of commercial property values along the arterial

roads were depicted on a Value Map. Models were also derived to assist Estate Surveyors and Valuers, real estate developers and financiers in predicting accurately future values of commercial properties along the arterial roads in the study area.

The studies so far have been in-depth however there was no nudging for investors in making decision amongst given alternatives particularly amongst the Nigerian researchers. This present study takes a leap in this direction.

Methodology

The methods are principles underlying any given research which logically involves obtaining information via peculiar field work, data collection, sample size and frame, sampling procedure, data requirements through primary sources and secondary sources and method of data analysis. The methodological framework used to attain the stated aim and objectives of the study are examined, also the type and sources of data examined are usually along the procedure employed.

This is a cross-sectional research that entailed the survey of the entire 22 Estate Surveying Firms in the study area. The major instrument for data collection of this study is questionnaire for Estate Surveyors and Valuers involved in the study. However,

the researchers also embarked on participants' observation of the properties in the area to know the number of commercial properties in the area. The method used in analyzing the data includes frequency distribution as well as other techniques. The collected data was arranged, tabulated and presented to allow for meaningful analysis and interpretation. The data of the frequency table was presented using diagrams, charts and graphs, in addition to the simple linear regression models of Microsoft Excel. Data was processed by coding using the Statistical Package for Social Sciences (SPSS) software in determining any statistical significance amongst the three sets of rental values by the use of the Analysis of Variance (ANOVA) coupled with the Tukey post-hoc test at the 95% confidence level.

3. Findings and Discussions

The administration of questionnaire to Estate Surveyors and Valuers was carried out personally, and the various responses were subsequently analyzed using the Statistical package for social science (SPSS) software. Twenty-two (22) copies of questionnaire were distributed to the firms of practicing estate surveyors and valuers in Akure. Nineteen completed questionnaires were returned resulting to a response rate of 86%. This was found substantial for convincing analysis.

In achieving the objective of this study, the researchers embarked on a participant observation of all commercial properties in the area. It was observed that the commercial properties were grouped into Purpose-built office space, Converted office space and Shopping Complex. The frequency distribution of the three types of commercial properties are given in Table 1.

Table 1: Frequency Distribution of Commercial Property along Oyemekun Road

S/N	Type of Office		Percentage
1	Purpose-built	40	31.0
2	Converted	70	53.0
3	Shopping Complex	21	16.0
	Total	**131**	**100**

Source: Authors' Field Survey, 2012

From Table 1, it can be seen that converted office space ranked the highest type of commercial property found in the area, constituting about 53% of the total number of properties along Oyemekun Road. This indicates that the type of office spaces mostly common in the study area is the converted office space. The study area, Oyemekun was mainly of residential use before commercial activities evolved and demand for office spaces encouraged owners to convert to offices. However, the respondents asserted that they have more of shopping complexes under their management portfolios as shown in Fig. 1
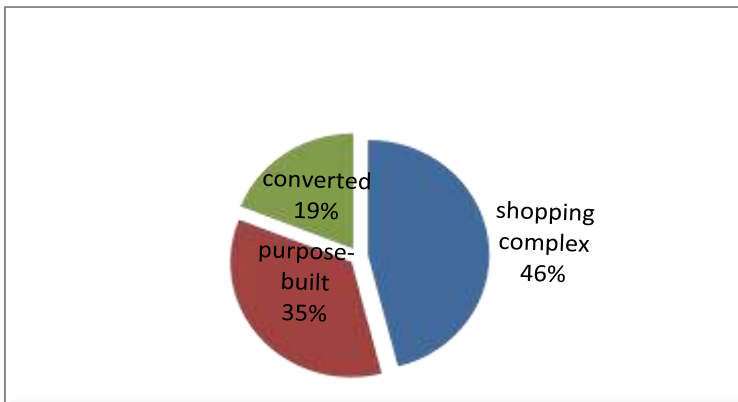

Fig. 1: Pie Chart Showing Percentages of Commercial Properties managed along Oyemekun Road.

Figure 1 shows the percentage of commercial properties available in the respondents' management portfolio. During the course of the field survey the researchers discovered that most of the converted office spaces were not being managed. As a result, most estate firms do not have converted office spaces in their management portfolio. Hence, of the 70 converted office spaces in the study area only 13 are being managed. However, the shopping complex which is the least in number happens to be the most managed.

Rental values of the various types of commercial properties along Oyemekun Road, Akure between the years 2006 and 2011

The study period of between year 2006 and year 2011 reveals that the average rental values per annum of these commercial property types are as shown in Table 2.
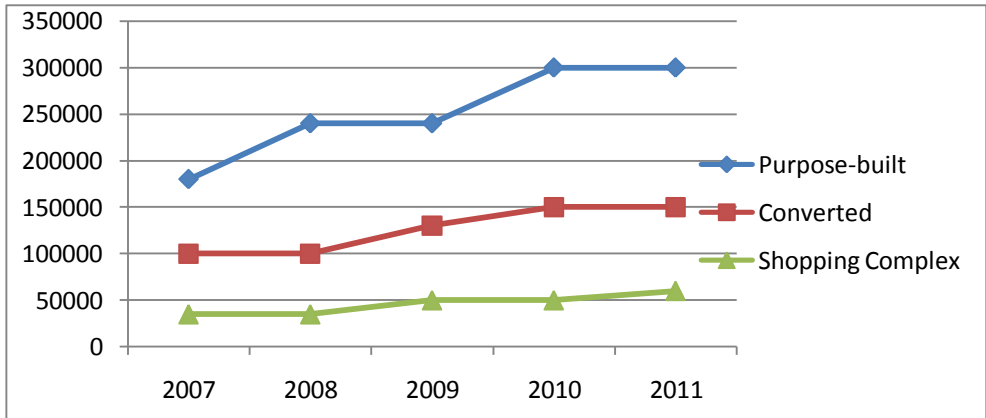
Table 2: Average Rental Values of Commercial Properties

S/N	Office Space	2007	2008	2009	2010	2011
1	Purpose-built	195,000	240,000	240,000	300,000	300,000
2	Converted Office	100,000	100,000	130,000	150,000	150,000
3	Shopping Complex	35,000	35,000	50,000	50,000	60,000

Source: Authors' Field Survey, 2012

Trends in the rental values of the commercial properties along Oyemekun Road, Akure

From the average rental values of the different commercial properties within the area obtained, the trend in the commercial property values were obtained and shown in Figure 2

source: **Authors field survey 2012**
Figure 2: Trends in Rental Values of Commercial Properties

The future trend was considered using linear regression analysis for each of the properties in the study area with time as the independent variable to explain how the rental values of these properties vary with time. The graphic details below elucidate better:

Table 3: Rent paid for Purpose-built Office from 2006-2011

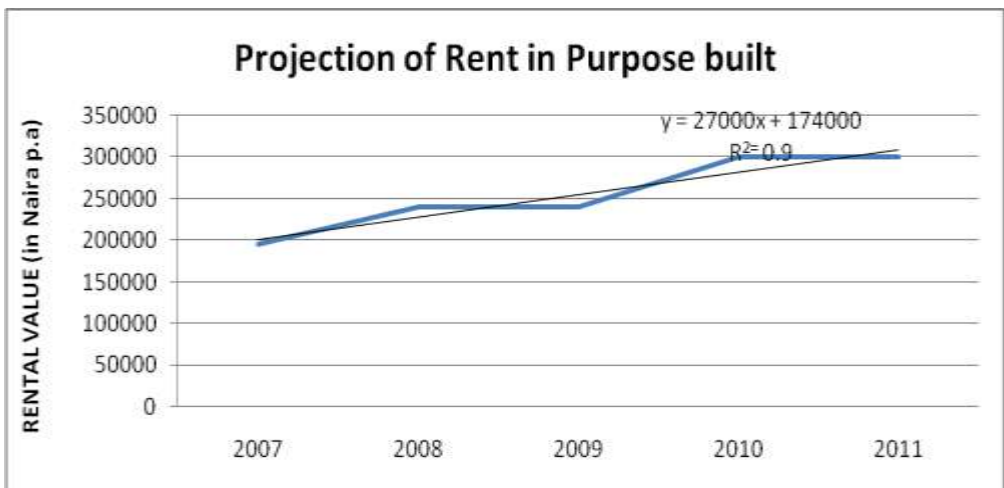| S/N	Office Space	2007	2008	2009	2010	2011
1	Purpose-built	195,000	240,000	240,000	300,000	300000

Fig 3: Trend in Purpose-built Properties

Table 4: Rent paid for Converted Office Space from 2006-2011

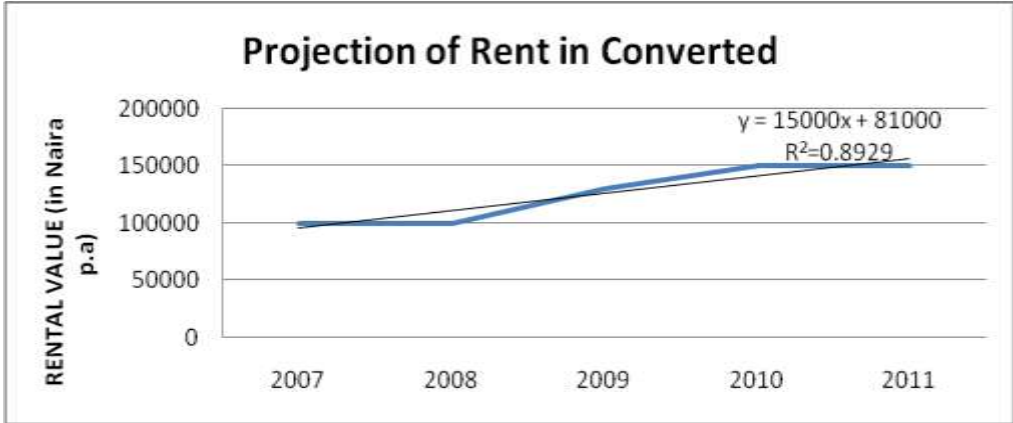| S/N	Office Space	2007	2008	2009	2010	2011
1	Converted	100,000	100,000	130,000	150,000	150,000

Fig 4: Trend in Converted Office Space

Table 5: Rent paid for Shopping Complex from 2006-2011

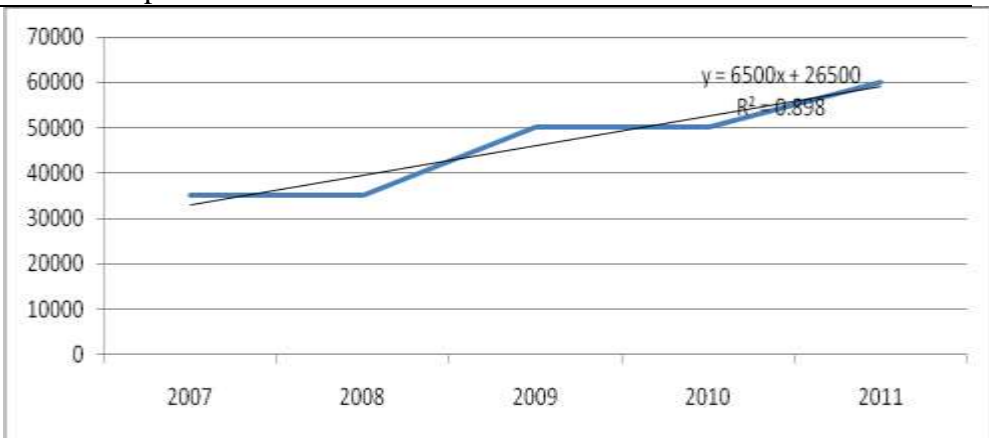| S/N	Office Space	2007	2008	2009	2010	2011
1	Shopping Complex	35,000	35,000	50,000	50,000	60,000

Fig 5: Trend in Shopping Complex

Source: Authors' Field Survey 2012

Commercial properties with the highest trend in rental values over the years in the study area

From the projections seen in the following linear equation as follows

Y= A + Bx

This can aid in projecting future rental income

Where:

Y= the calculated or estimated value for the dependent variable (projected rent)

A= the Y intercept, the theoretical value of Y when X=0

B= the slope of the line, the change in Y is divided by the change in X, the value by which Y changes when X changes by 1.

X= the number of years projected for.

Therefore, from the graph above, it is evident that the following R^2 applies to the linear equation for the various commercial properties. R^2 in regression analysis represents the level of relationship by which the variation in outcome of the dependent variable can be accounted for by the independent variable. The R^2 of the three commercial properties as shown in the graph above are as follows: Purpose-built office space = 0.9; Shopping Complex = 0.8989; Converted Office Space = 0.8929. Although the high R^2 value of the three commercial property types indicate a very strong positive relationship between time and rents, from above it can be seen that the R^2 of the purpose–built office space is the highest among the three commercial properties. Therefore, it is the property whose rental values can be most ascertained with each successive year under study. Hence, it implies that about 90% of the variation in rent of purpose-built office space is explained by variation in time in the model, making it the property with the highest trend over the years as revealed in Fig 6
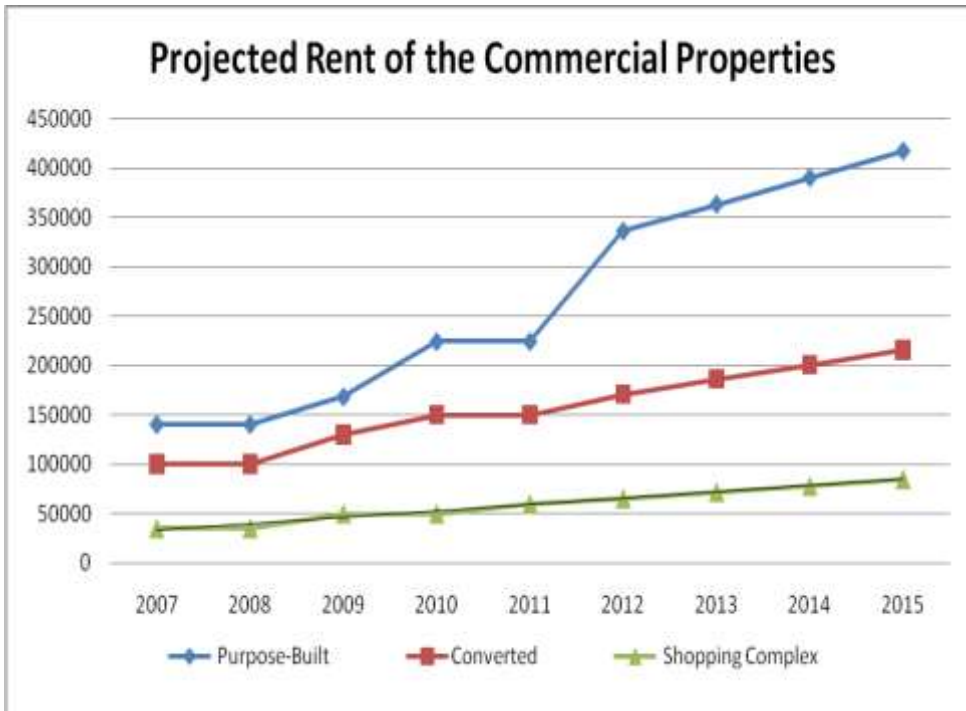
Fig 6: Projected Rent of the Commercial Properties

Significant difference in the rental values passing on the properties in the study area

An Analysis of Variance (ANOVA) was conducted to discover if this difference in rental values is quite significant. Results from the SPSS analysis produced the following relevant Tables (6-8).

Table 6: Descriptive

Rent

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
pur	5	255000.0000	45000.00000	20124.61180	20124.61180	310874.8799	310874.8799	310874.8799
con	5	126000.0000	25099.80080	11224.97216	11224.97216	157165.5190	157165.5190	157165.5190
sho	5	46000.0000	10839.74169	4847.67986	4847.67986	59459.3170	59459.3170	59459.3170
Total	15	142333.3333	93462.49566	24131.91261	24131.91261	194091.1383	35000.00	300000.00

Table 7: ANOVA
Rent

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.112E11	2	5.560E10	60.164	.000
Within Groups	1.109E10	12	9.242E8		
Total	1.223E11	14			

Table 8: Multiple Comparisons
Dependent Variable:Rent

	(I) property	(J) property	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Tukey HSD	pur	con	1.29000E5	19226.71752	.000	77705.7390	180294.2610
		sho	2.09000E5	19226.71752	.000	157705.7390	260294.2610
	con	pur	-1.29000E5	19226.71752	.000	-180294.2610	-77705.7390
		sho	80000.00000*	19226.71752	.003	28705.7390	131294.2610
	sho	pur	-2.09000E5	19226.71752	.000	-260294.2610	-157705.7390
		con	-8.00000E4	19226.71752	.003	-131294.2610	-28705.7390
Games-Howell	pur	con	1.29000E5	23043.43724	.003	59168.2601	198831.7399
		sho	2.09000E5	20700.24154	.001	138654.7866	279345.2134
	con	pur	-1.29000E5	23043.43724	.003	-198831.7399	-59168.2601
		sho	80000.00000*	12227.01926	.002	41344.5229	118655.4771
	sho	pur	-2.09000E5	20700.24154	.001	-279345.2134	-138654.7866
		con	-8.00000E4	12227.01926	.002	-118655.4771	-41344.5229

*. The mean difference is significant at the 0.05 level.

We can see from the output of the ANOVA analysis that there is a statistically significant difference amongst the means of the various types of commercial property in the study area. We can see that the significance level is 0.000 ($p = .000$), which is below 0.05. Therefore, there is a statistically significant difference in the mean rent collected on these properties. However, in order to know if the difference cuts across the three property types, the "Multiple Comparisons Table" which contains the results of Tukey post-hoc tests is referred.

We can see from the table below that there is a significant difference in rental values amongst the various types of properties. For instance, the rental values between the purpose built commercial properties and converted shops is significantly different ($p=0.000$); likewise the rental values between purpose built properties and shopping complex ($p=0.000$). The rental difference is also evident between

the converted shops and shopping complex (p=0.003).

In a nutshell, it is revealed that there is a statistically significant difference in the rental values amongst the three types of commercial properties in the study area as determined by one-way ANOVA ($F(2,12) = 60.164$, $p = .000$). A Tukey post-hoc test revealed that the rental values are statistically significantly different as follows: purpose built commercial property (₦255, 000 ±₦45, 000, $p = .003$); Converted Shops (₦126, 000 ± ₦25, 099.80, $p = .000$) and Shopping Complex (₦46, 000 ± ₦10, 839.74, p =.000). Hence, the difference in rental values is quite glaring with purpose built shops showing the most prospects in rental values.

Conclusion
The converted office space which happens to be the most evident amongst the commercial properties already reveals the status of the study area as residential base in time past. The shopping complex on the other hand being the most professionally managed reveals the status of this type of commercial investment when compared to others. Although the three sets of properties have quite high R^2 values, that of purpose built office space recorded the highest and also in rental values. There is therefore the need for investors and professional managing agents to devote much effort to the investment in purpose-built office space, in the area of development and management respectively, so as to maximize returns on investment.

References:

Anderson, S.T. & West, S.E. (2006) Open Space, Residential Property Values, and Spatial Context. *Regional Science and Urban Economics,* 36(6), 773-789.

Beer, A. (1999) Housing Investments and The Private Rental Sector in Australia *Urban Studies 36*(2), 255-269

Ball, M.; Lizieri, C. and MacGregor, B. D. (1998) The Economics of Commercial Property Markets, Routledge, 402 pp., ISBN 0-415-14992-4

Bjorklund, K. (1999) Real Estate Performance: Five Essays. Doctoral dissertation, Department of Real Estate and Construction Management, Royal Institute of Technology, Stockholm.

Briggs, P., and Ng, T. (2009) Trends and Cycles in New Zealand House Prices, *a Paper for CHRANZ Workshop*

Brown, G. and Chau, K. W. (1997) "Excess Returns in the Hong Kong Commercial Property Market" *Journal of Real Estate Research*, *14(*2), 91-106.

Chau, K. W., Wong, S.K., and Yiu, C.Y. (2004) The Value of the Provision of a Balcony in Apartments in Hong Kong. Property *Management, 22*(3), 250-264.

Chin, W.H (2003) Macroeconomic Factors Affecting Office Rental Values in Southeast Asian

Cities: The Case of Singapore, Hong Kong, Taipei, Kuala Lumpur, and Bangkok, *Paper presented at 2003 PRRES Conference, Brisbane, Australia.*

Dahoa, D. (2003) Accessing Hong Hong's deflationary Trend *Accessed February 14, 2004 from* http://www.ctctrade.com/econforum /boc031001.htm

Dehring*,* C.A.*,* Depken*,* C.A.*,* and Ward*,* M.R. *(*2007) The Impact of Stadium Announcements on Residential Property Values*:* Evidence from a Natural Experiment in Dallas-Fort Worth*. Contemporary Economic Policy*, 25(4), 627- 638

Idudu, O. J. A. (1989). Mobilisation of Private and Public Investments in Property Development. Paper Presented at the 19th Annual Confeence of the Nigerian Institution of Estate Surveyors and Valuers in Lagos, 6th – 9th April, 1989

Ijla, A.M. (2008) The Impact of Local Historic Designation on Residential Property Values: An Analysis of Three Slow-growth and Tree Fast-growth Central Cities in the United States PhD Thesis Submitted to the Department of Urban Studies and Public Affairs, Levin College of Urban Affairs, Cleveland State University.

Iroham, C.O., Oloyede, S. A. and Oluwunmi, A. O. (2011) An Analysis of the Location of Worship Centers on Residential Property Values in Ota, Nigeria, *Journal of Sustainable Development in Africa 13*(1); 14-22

Jensen, D. and Durham, J. (2003) The Property Value Effects of the South Ridegline rail. Retrieved from: http://economics.uoregon.edu/honors-papers/2003/Ridgeline%20paper .pdf on February 2, 2010

Jeong, and Kim (2009) A Study of Retail Rents with VAR Model (in South Korea), Paper presented at the Pacific Rim Real Estate Society Conference, Sydney, Australia, 18 – 21 January

Kivilahti, A., and Viitanen, K. (2006) Dynamics of the Commercial Property Markets in Finland, *Shaping the Change XXIII FIG Congress, Munich Germany.*

Langdon and Everest (2003) Analysis of Historical Construction Costs Movements in Scottish Social Housing: Final Report, Assessed on May 31 2013 from

http://www.scotland.gov.uk/Publications/2004/06/19127/34780

Lee, K. (2008) Foreclosure Price-Depressing Spillover Effects on Local Properties: A Literature Review. Public and Community Affairs Discussion Paper 2008-1 Federal Reserve Bank of Boston

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 T*he Michigan Journal of Business, 3*(2), *61-83.*

McCluskey, W.J., Deddis, W.G., Lamont, I.G., and Borst, R.A. (2000). "The Application of Surface Generatedinterpolation Models for the Prediction of Residential Property Values. *Journal of Property Investment & Finance,* 18(2), 162-176.

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

Nwuba, C. C. (2004). An Analysis of Location Differences in Trends in House Rents in Kaduna, Nigeria, 1986-2003 *The Estate Surveyor and Valuer*, *27*(1), 64-71

Nwuba, C. C. and Adeagbo, D. O. (2007).The Relationship between Housing Construction Costs and House Rents Trends in Kaduna, Nigeria. *The Quantity Surveyor*, *55*(2), 24 – 30

Nwuba, C. C. (2008). Analysis of Office Rent Movement in Abuja, *Nigerian Journal of Education 7*(1), 1-11

Olujimi, J. A. and Bello, M. O. (2009). Effects of Infrastructural Facilities on the Rental Values of Residential Property, *Journal of Social Sciences 5*(4), 332-341, 2009

Omuojine E. O. (1994). Property Market in Nigeria: Analysis and Perspective. The Estate Surveyor and Valuer, *18*(1), 15 - 21.

Oni, A. O. (2009) Developing Predictive Models of Commercial Property Values in Emerging Economy: Case Study of Ikeja, Nigeria, Paper Delivered at the 9th International Conference organized by African Real Estate Society Held at Lagos Oriental Hotels, Lekki, Nigeria 20th – 23rd October,

Provencher, B., Sarakinos, H., and Meyer, T. (2006). Does Small Dam Removal Affect Local Property Values? An Empirical Analysis, University of Wisconsin-Madison Agricultural & Applied Economics Staff Paper Series.

Scott, P. and Judge, G. (2000) Cycles and Steps in British Commercial Property Values, *Applied Economics*, *32*, 1287-1297

Shipley, R. (2000) Heritage Designation and Property Values: Is there an Effect? *The International Journal of Heritage Studies, 6(1), 1-18.*

Singh, V., and Komal (2009) Problems and Prospects of Real Estate in India *International Research Journal of Finance and Economics, Issue 24, 243-254.*

Slade, A. (2000) Office Rent Determinants during Market Decline and Recovery. *Journal of Real Estate Research, 20*(3), 358-380.

Tay, R. S., Lau, C. K. and Leung, M. S. (1999) The Determination of Rent in Shopping Centers: Some Evidence from Hong Kong, *Journal of Real Estate Literature*, 7(2), 183-196

Thibodeau, T.G. (1990) Estimating the Effect of High Rise Office Buildings on Residential Property Values, *Land Economics,* 66(4), 402-408.

Ustaoglu, E. (2003) Hedonic Price Analysis of Office Rents. A Case Study of the Office Market in Ankara *A Thesis submitted to the Graduate School of Social Sciences of Middle East Technical University*

Woods, M. (2007). A Financial Stability Analysis of the Irish Commercial Property Market. *Financial Stability Report. 75-90.*

Wu, H., Wong, S.K., Mckinnell, K., Reed, R., and Robinson, J. (2009) Commercial Property Markets and Property Cycles in Chinese Cities, *A paper delivered at the 15th Pacific Rim Real Estate Society Conference Sydney, Australia .*