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An Assessment of the Market Performance of Commercial and Residential Property Investments in Lekki, Lagos, Nigeria

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Abstract

The housing deficit issue in Lagos is creating investment opportunities for prospective investors to profit from in prime zones. Still, some investments are executed by investors with the assumption that their location or remitted rents validate their investment soundness. The purpose of this research was to assess the market performance of commercial and residential property investments in Lekki, Lagos, Nigeria with the target of directing sound investment decision-making amongst investors. Its objectives include; the examination of the drivers of demand for the two classes of property investment, the determination of the user demand hierarchy of the investment classes, the observation of factors that determine the market performance of the investment classes and the measurement of market performance of the investment classes in the study area. The Survey Research Design was adopted, while the sample selection was via Krejcie and Morgan's technique. A total of 108 questionnaires were distributed across registered professional firms within Lekki. A total of 78 questionnaires were retrieved and a 72.23% response rate was achieved. Holding Period Return (HPR), Coefficient of Variation, Standard Deviation and Geometric Mean Return were employed in data analysis. It was discovered that the major driver of demand for commercial property investment in each zone of the Lekki axis is its business hub status, while the drivers for its residential counterpart are; Phase 1 (Prestige), Ikate (State of the economy) and Ikota (Level of infrastructure). The findings reveal that within Lekki, Ikota (11.4 & 9.63) had a better market performance of residential and commercial property investments compared to Ikate (10.87 & 9.16) and Phase 1 (10.08 & 9.04) in terms of their average holding period return and time weighted rate of return. The study recommended the consideration of the Ikota and Ikate axis for future residential and commercial investments by potential investors.

Keywords: Holding period return, time weighted rate of return, performance measurement

1.0 INTRODUCTION

With the strong emphasis on performance assessment of investments (ownership, lending or cash) in developed economies around the world, emerging economies that are faced with more population challenges, will have to address it. The influence of the international and local market is orchestrating investment decisions amongst investors that without the proper understanding of performance assessment, intuitive knowledge of real estate professionals may not be sufficient to meet the investor's objective (Ajayi & Fabiyi, 1984; Udobi et al, 2018). The risk element implicit in real estate investments influences not only its acceptance but also any commitment to its continuity. By default, a rational investor is risk-averse and would only commit to an investment if the risk-return is profitable and sustainable (Markowitz, 1999). Successful investors are progressing from the initial strategic investment decision-making of an investment option to the process of assessing their relative performance to other investment alternatives and this aids and directs commitment to such venture (Dubben & Sayce, 1991; Platanakis et al, 2019). From the outset, investor considerations are primarily targeted at maximising returns and minimising risk (Ajayi, 1998).

Market performance assessment of real estate objectively evaluates the representation of an asset/investment on a risk-return basis, within and in comparison, to others in the market. In other words, it assesses how an asset/investment has acted within itself and at the market, in the face of several factors. Otegbulu (2022) observed property performance as comparatively assessing a real property alongside its alternative investments. The risk and return of the property are rated alongside their alternatives. Such analysis is to gauge the growth, maintenance and conformance with the investor's expectations. The assessment of market performance can be linked to identifying the performance indicators. The process of identifying such indicators and assessing performance is known as performance measurement.

While there exists a series of research on the performance (independent or dependent) of real estate investment (direct or indirect) in Nigeria, few have touched on the evaluation aspect of such performance. Some of the research on the performance of direct real estate investment include; Oyewole (2013), Udobi et al (2017), and Adeniran (2015) while studies on the performance of indirect real estate investment include; Adegoke (2009), Olaleye, et al (2010), and Amidu, et al (2008).

The Lekki axis has enjoyed a luxury status due to a host of factors represented in the degree of infrastructural development; the hub of major business conglomerates and their headquarters; luxurious real estate; vibrant commercial activities; security and its position by the lagoon (Jemimah, 2017). From a residential real estate perspective, it is the functionality and the enhanced degree of infrastructure in the Lekki areas, alongside the security and amenities provided in gated communities that makes the Lekki axis an attractive place to be (Northcourt, 2022). The same is similar from a commercial real estate perspective, as the pool of infrastructural development in the Lekki axis has bestowed a city-central status on it. Naturally, such attraction of people, establishments and structures to the Lekki axis places it as a prime investment area.

1.1 Statement of Research Problem

On the premise of such potential, this study identifies as a problem, real estate professionals and investors resort to a back-of-envelope approach in initiating investments in either commercial or residential real estate in the study area and with the anticipation that it will always be occupied and yield rent continually. This is a problem, as in most instances, the collection of rent in a property may present the illusion that the property is doing well, whereas, the opposite is the case. The current return (rent or capital value) of a property investment might not reveal its highest value, especially when compared to the level of risk and cost used to set it up. Such phenomenon has been ascribed to either a shift in property demand (Investopedia, 2022); quality and obsolescence associated with the property (Baum, 1993; Usman, 2016; Alyssa, 2021); shift in land use pattern in the locality (Danya & Jangik, 2019; Adegunle, et al, 2019) or the common issue which is the impact of the international and local market on market forces (Abdel-rahman, 2018). The paucity of data further worsens the issue of performance measurement or evaluation, as most investment owners and managers have no knowledge of performance ratings in the market nor do they know how well their property (residential or commercial) is performing compared to that which is average or optimum in the Lekki property market. A relatable example is the assumption of a good performance on residential properties based on high demand for an accommodation type (studio apartments) in the Lekki axis without the evidence of thorough analysis. The same also holds for commercial developments in the form of shops and offices in the Lekki axis.

This absence of concern or lack of consciousness thereof is worrisome, especially for investments seeking to be efficient and of maximum benefit to their owners and managers in a prime market like Lekki, Lagos.

1.2 Aim and Objectives

To assess the market performance of both commercial and residential investments in the study area, the objectives include; (1) examination of the drivers of commercial and residential demand in the study area, (2) determination of user demand hierarchy of specific commercial and residential investments in the study area, (3) observation of factors that influence market performance of commercial and residential investments in the study area and (4) to measure the market performances of specific commercial and residential investments in the study area. It is important to note that in the measurement of performance, specific accommodation types were chosen for the residential investments and converted residential accommodations were chosen for the commercial investments.

■2.0 LITERATURE REVIEW

2.1 Reviewing the Performance of the Property Market at National and State Levels

Ibrahim et al (2022) noted that although Nigeria possesses a large real estate market, it appears untapped due to limited knowledge of property attributes; their values and effects on market prices, existing properties, establishments and the limited knowledge of available professional sacrifices across the world. In various locations, factors such as population, proximity to school or workplace, workforce and traffic congestion, externally determine property values (Oni, et al, 2015).

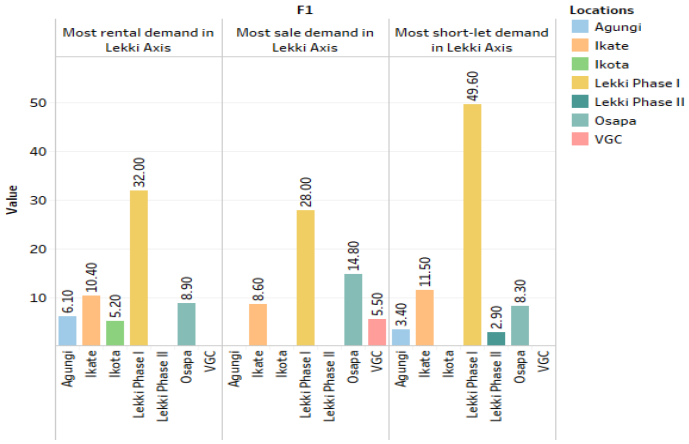

Figure 1 Demand trend for property searches on an online platform
(Source: Nigeria Property Centre, 2022)

The post-pandemic situation of the Nigerian Property Market is adapting to the changes occasioned during and after the global pandemic. The National Bureau of Statistics (2022) recorded a year-on-year Consumer Price Index in January 2022 at 15.60, which had fallen from 15.63 recorded for December 2021 and 16.47 recorded for January 2021. In other words, the rate of inflation had dropped, thereby signalling a potential rise in economic growth. Still, living costs had progressed to a new high in January 2022 (CPI of 15.60) compared to January 2020 (12.13) and January 2019 (11.37). Its impact would be two-fold as seen in the reduction of the purchasing power of the naira for certain commodities and the rise in the cost/price/value of most goods.

In the wake of such economic changes, the pallet for real estate investment remained high and attractive for most investors, as the low production and investment turnover in oil output is becoming much more evident due to poor management and investment in infrastructure (Nairametrics, 2022). Northcourt (2022) observed an increased demand for residential accommodation in Abuja City due to its attribute of security, which is much more prioritised than in other cities in Nigeria. Such observation tallies with the United Nations projection of Abuja being the fastest growing city in Africa by 2025, at a rate exceeding 6% growth. The Nigerian real estate sector's contribution to the GDP increased from 2% in 2008 to 5.57% in 2021 and it is believed that there is still more potential for improvement (NBS, 2021)

In Lagos, specific real estate investment classes such as student accommodation and commercial accommodation for essential household goods and services have retained their leads as the big gains (performance-wise) in the real estate market, while the classes of office accommodation and hospitality facilities are slowly dropping into big losses, due to the factors of oversupply and inflation (Estate Intel, 2022). The factor of oversupply can be attributed to a paradigm shift in the preferences of the masses towards office accommodation, concerning office grades. The shift in demand from grade A office spaces to grade B or C by office users would have been awakened by the impact of inflation or the aftermath of the 2020 pandemic with its popular notion of minimal space needs and the gradual adaptation of businesses to technological leverages.

The importance of property investments is no longer limited to purchase or asset formation for personal use/establishment-wise, but to obtain additional income (Klimczak, 2010). This follows that the activeness of real estate markets in Nigeria and Lagos respectively can be stirred by the recognition of the income-producing potential of space or assets in such areas. These investment decisions are subsets of economic decisions, in that the limited supply of available resources is always considered, which in turn spurs the desire to acquire the readily available. The endgame is to obtain profit which is generated from the increased value of the asset either in interest, profits or dividend forms (Klimczak, 2010; Otegbulu, 2022).

Building on the foundation of change initiated since the pandemic, the Lagos real estate market might witness an increased demand for smaller space sizes, shared apartments and short-lets and feel the impact of increased construction costs due to national and international economic downturns or wars (BuyLetLive, 2022). Emmanuel (2022) opined that the properties located in the Lekki axis would continue to reap both economic and value gains because of its location. Its prime position in the economic nerve centre of Nigeria (Lagos) naturally opens it up to more business, recreational and free trade operations and patronage. As such, there is usually an increased demand for spaces, thereby making its property market one (if not the most) of the active property markets in Nigeria.

In summary, the Lagos property market still provides an avenue for housing investments, as its housing deficit is still considered above 2 million units (Behr, 2021).

2.2 Performance Measurement and Performance Evaluation: Meaning and Previous Studies

Zarin and Bujang (1997) noted that there is originally no definition for property performance measurement, but it has come to be associated with gauging the effectiveness of an investment decision, amidst other alternatives. The authors observed two purposes of such measurement, of which its primary purpose is benchmarking the results of an investment decision (portfolio) previous performance against projected targets and the secondary purpose is to compare an investment decision (portfolio) against other investment alternatives, i.e. stocks, shares, etc.

Primarily, the metrics used in determining the performance of real estate investment rest on reducing costs (risk) and maximising capital (return), with an added feature of informing the investor on which investment should receive greater or lesser spending or which needs to be overhauled or sold off completely (Idowu, 2006; Bello et al, 2015). Performance measurement not only assesses the critical elements that are vital to the success of an investment held singularly or in the portfolio, it forestalls deviation by objectively assessing the state of the investment and directs the needed actions towards the success of the investor's objectives (Kaplan & Norton, 2000; 2004).

Otegbulu (2022) identified a distinction between performance measurement and performance evaluation. While performance measurement is concerned with the assessment of return that is realised in an investment decision (portfolio) over a period, performance evaluation is concerned with determining if an investment decision (portfolio) has under-performed or over-performed its benchmarks. Good property strategies will ensure that mixed asset portfolios enhance investment performance (Isaac, 1988; Otegbulu, 2022). Such strategies should contain objectives that are steered towards maximising returns and minimising costs.

The studies existing on performance assessment of real estate compared to other investment forms in the developed economies include; Zerbst and Cambon (1984); Chen and Thibodeau (1984); Hoesli and Lizen (2007); Newell and Hsu (2007) and Newel et al (2009). Such studies provided information on the relative performance of real estate investments compared to other forms of investment, with conclusions showing real estate as a better investment decision when held singularly or as a portfolio.

There is the existence of some related studies within Nigeria on the subject of real estate investment performance. Adeniran (2015) in an evaluation study of the performance of residential property types in Ado-Ekiti between 2008 and 2014, discovered that returns on investment in residential properties located in GRA, Adebayo and Ajilosun were higher compared to those in Basiri, Ajebandele and Okella. The study recommended investors direct future investments towards properties yielding the highest returns and efficient combination in the investment portfolio. Some property investments enjoy locational and demographic advantages compared to others, while others because of vacancy or absorption rates, enjoy a better market performance rate than others.

Udobi, et al (2018) noted in a study evaluating the performance between commercial and residential property investments in Onitsha (Anambra State), that within nine years, commercial investments fared better at 19% than their residential counterparts at 17%. While in terms of risk-return and risk profiles, residential property investments performed better at 11.34% (risk) and 0.67 (risk-return) compared to their commercial counterparts at 15.88% and 0.84% risk-return.

In a similar study, investment performance between commercial and residential real estate investment in Lagos and Port-Hacourt, Osa and Ekenta (2019) observed that commercial real estate investment in the two areas for seven years outperformed the residential real estate investment counterparts at a summated return mean of 1.233 compared to 1.0095.

Udoetuk (2008) noted that performance evaluation is difficult for real estate because, unlike other types of investment, real estate seldom changes in its capital value and income generated by the investment. Also, because real estate is unique in its nature and location, it may not be regularly revalued and sometimes if it has not been placed in the market, there would be no data to assess (Udoetuk, 2008). Still, historical data can equip an investor or manager with a possible target of future returns from an investment (Udoetuk, 2008).

There are certain parameters by which a portfolio's performance in terms of investment return can be measured. They include; Income against Value, Income against Cost, Income against Growth, Value against Cost, Rental growth, Rental value against Income, Money Weighted Rate of Return and Time Weighted Rate of Return (Hall, 1981; Canadian Imperial Bank of Commerce, 2021). Others include; Total Return, Cumulative Wealth Index, Arithmetic Mean Return, Geometric Mean, and Real Returns, Sharpe Ratio, Jensen's Alpha, Treynor Ratio, amongst others (Aragon & Ferson, 2006).

2.3 Factors Influencing the Market Performance of Property Investments

It is believed that socio-economic factors may influence the number of such developments in certain areas, as a study conducted in Poland and Malaysia showed that price, security and a quiet neighbourhood were major factors influencing property buyers' choice of residential location (Zrobek et al, 2015; Mariadas, et al, 2019).

Unlike residential property markets, commercial property markets bear the brunt of economic influences more and this is due to its cyclical nature (ESRB, 2015). Banyte and Maliene (2017) noted that elements such as financial stability, supply and demand, bank lending state, financial stability and fluctuations in commercial property can influence the property market. As a unique classification of the property market, commercial property is targeted at commercial profits and the likes of factory layouts, malls, office buildings and shops are its manifestations.

In a study of factors affecting commercial property value, How et al (2019) distinguished these factors into two broad classes namely; Macro and Micro factors. The macro factors centred on the state of the regional economy where the commercial property is located; The degree of policy intervention in commercial property development; the density factor; the land use factor; the supply of new properties or conversion of existing ones into alternative uses and the non-domestic property tax factor. Under micro factors, the authors categorised the likes of traffic volume; social amenities; transportation and infrastructure; neighbourhood quality, corner piece quality; property age; quality of highway; flood zone; international airport; energy efficiency/performance; design quality of commercial buildings, technological integration and timeline of property in the market.

Poinsot and Ruault (2019) opined that the essence of economic base theory was to explain how external revenues (proceeds from trading basic activities) are the powerhouses of economic activities at local levels and the basic activities are the lifeline of the non-basic activities in an area/region. The authors observed that from the 1990s, variant applications of the theory have permitted definitions of external revenue to various types of wage and non-wage sources (external). In other words, this explains how economic activities in Lagos relate to its increased real estate market activities.

Commercial and residential land uses are a subset of urban land use and it is not strange to find a shift from one land use to the other in an urban centre, either partially or wholly (Raharjo, 2005). Such changes in land use have been attributed to the pace of growth in any of the land uses or demand by population increase in an area (Ifeoluwa, 2011; Abdul-rahman & Mohammed, 2015). To discuss commercial developments, one cannot skip over the fact that commercial land uses are prone to overrun existing residential land uses closer to city centres, thereby leading to traffic congestion and the devaluing of urban quality. This is especially so when demand exceeds supply and zoning policies are not stringent in ensuring adherence (Gandu, 2011).

Even real estate and its heterogeneous markets are influenced by the changes encountered in an economic period. Otegbulu (2022) noted that business/economic cycles are the origins of property cycles. This is because real estate activities operate within the economic environment and can be influenced by periods of economic booms and bursts. The fact that the property market is prone to degrees of seasonality and cyclicality, places the demand for an assessment of the market performance of already existing property investments, to guide potential commitments to property investments.

Murdock (2021) observed that the rental property life cycle is affected by the number and quality of units available in the market. In other words, the rate and quality of residential units in a market can dictate the rental life cycle of specific property types in a region or zone. The author observed that an understanding of market saturation and its rates also informs the rent estimates that are calculated for a property by a property manager or owner. The rates of rental market saturation include; vacancy and absorption rates. Other factors which could influence market saturation include; renting density trend, new construction units, unit distribution, income distribution and unit affordability.

2.4 Identified Research Gap in Literature Reviewed

Previous studies have focused on the comparative analysis of either residential or commercial (strictly) classes of investment properties based on annual returns, risk profile and risk-return profile. Also, these studies looked at the rate and difference in capital appreciation between these classes of investment properties in their respective study zones. This study takes a different approach by utilising MPHR

and TWRR. This study contributes knowledge on the analysis of the performance of commercial (converted residential spaces) and residential property investments in the Lekki Axis of Lagos, Nigeria using the conventional MPHR and TWRR.

■3.0 METHODOLOGY

This study adopted the survey research method. The survey research method refers to a systematic process of obtaining information about a population, phenomenon or situation, without actively influencing its results.

The data used in this study were obtained from a primary source through a structured questionnaire, telephone surveys, and independent observations, and the population of the study comprises registered real estate firms in Lagos. According to the 'Nigerian Institution of Estate Surveyors and Valuers' (NIESV) Directory, there are 264 registered Estate Surveying and Valuation in Lagos, out of which 151 were located in the study area. In total, 108 questionnaires were distributed using simple random sampling in the study area (Lekki) by research assistants; while Seventy-Eight (78) representing 72.23% response rate were retrieved and used for the analysis (see Table 1 below);

Table 1 Administration of questionnaires

	Number of Questionnaires Administered	Number of Questionnaires Retrieved	Percentage (%)	Number of Questionnaires Used for Analysis	Response Rate (%)
Lekki Axis	108	83	76.85	78	72.23

(Source: Field Survey, 2022)

3.1 The Study Area

This study was Lekki zone which covered the following axes; Phase 1, Ikate and Ikota. Adam Augustyn (2020) noted that Lagos was until December 1975, the Federal Capital Territory of Nigeria and is located in the South West. It is Nigeria's largest city and its commercial nerve. It has remained the unofficial seat of many government agencies. Lagos has a rich history of commercial trade and activities, right from the late 16th century, and has witnessed bilateral trade and leadership from both the Portuguese and British nations. With a low-lying territory, Lagos's topography is dominated by islands and lagoons. Recently, the land reclamation projects (Eko Atlantic City) and the efforts at mitigating traffic problems via new road and bridge networks, have heightened interest in the systems of land utilisation in Lagos State.

For this study, the dominant residential bedroom/accommodation types selected were 2- and 3-bedroom apartments, 3-bedroom detached duplexes and terrace duplexes. The dominant commercial accommodation types selected were the converted residential 3 and 4-bedroom detached duplexes.

Data collected were analysed using statistical tools such as Holding Period Return (HPR), Coefficient of Variation, Variance, Standard Deviation, Covariance and Geometric Mean Return. They are described in Section 3.2

3.2 Statistical Tools Utilised

a. Holding Period Return (HPR)

In financial terms, it refers to the return earned on an asset/portfolio over the entire period that it was held. Another way to view it is as a change in the asset/portfolio value over an exact period. Chen (2022) stated that it is the total return received from holding an asset or portfolio of assets over some time, known as the holding period, generally expressed as a percentage. The author noted that it is useful, particularly in return comparisons between investments held at different periods. It is denoted by the formula;

$$HPR_n = \text{Income} + \frac{P_{n+1} - P_n}{P_n} \quad (1)$$

Where;

HPR_n = Holding Period Return for n period
P_n = Value of asset/portfolio n at the start of the holding period
P_{n+1} = Value of asset/portfolio n at the end of the holding period

b. Standard Deviation

This is simply a measure of the degree of dispersion of a given value set. Rationally, a low standard deviation indicates that the member(s) of the value set are closer to the mean of the set and a higher one indicates that they are dispersed widely from the mean of the set. It is the square root of variance. Hargrave (2022) observed that standard deviation assists in assessing risks, recognising potential or hidden ones and making informed decisions. It is denoted by the formula;

$$\delta = \sqrt{\frac{\Sigma(x-X)^2}{n-1}} \quad (2)$$

Where;

δ = Sample Standard Deviation
Σ = Summation
x = Value of one observation
X = Mean value of all observations
n = Number of observations.

c. Coefficient of Variation

This is also known as relative dispersion and is expressed as the ratio of the standard deviation to the mean. It measures the relative depression of data sets around the mean. Thus, the greater/higher the coefficient of variation, the greater the dispersion levels the data set has around the mean. It is represented thus;

$$\text{Coefficient of Variation} = \frac{Standard\ Deviation}{Mean} \times \frac{100}{1} \quad (3)$$

From a financial perspective, it enables investors to determine how much risk is assumed in comparison to the expected return amount from investments (Hayes, 2022). Umeh (2018) observed that the coefficient of variation interprets an investment portfolio performance as better with a higher coefficient of variation than another investment portfolio with a lower coefficient. The author explains further that in investment analysis, the measure of risk is variation and the higher it is, the higher the yield/performance. It reveals the risk-return profile.

d. Geometric Mean Return/Time Weighted Rate of Return

This is used to determine the performance of an investment/portfolio. This is calculated using percentages and it provides a more rounded and accurate average of value sets in a portfolio. Geometric mean return is essentially the same as Time Weighted Rate of Return and it is denoted as;

$$RT = [(1+R_1)(1+R_2)\ldots(1+R_n)]^{1/n} - 1 \quad (4)$$

Where;

$R_1 \ldots R_n$ = Returns of an asset

■4.0 RESULTS

In this section, each discussion heading addresses an objective/research question raised in the study. From Table 2, 55.12% of the respondents are male while 44.88% represented their female counterparts which shows that the majority of the study respondents are male. On the age distribution, 38.47 % of the respondents were 35 years and above followed by those between age 30-35 years represented by 6.41%, while 25-30 years and 20–25 years were 34.62 % and 20.51% respectively. The table also shows that the majority of the respondents are BSc. (34.62%) and HND (29.49%). Closely followed are the MSc. (20.51%) and OND (15.38%) degree holders. The non-professionals constituted 12.82% of the respondents, while the professional qualifications of the respondents included Fellows, Associates, and Probationers of the Nigerian Institutions of Estate Surveying and Valuation profession with 3.85%, 32.05% and 51.28% respectively. In sum, the respondents in this study have been in real estate business (agency, property management, valuation, project management etc.) activities for a significant number of years, and therefore, the data elicited from them were considered reliable.

Table 2 Background information on the respondents (professional real estate firms in the study area)

Number	Characteristics of Respondents	Frequency	(%)
1.	**Gender**		
	Male	43	55.12
	Female	35	44.88
2.	**Age**		
	15-20 years	0	00.00
	20-25 years	16	20.51
	25-30 years	27	34.62
	30-35 years	5	6.41
	35years and above	30	38.47
3.	**Educational Background**		
	MSc.	16	20.51
	BSc.	27	34.62
	HND	23	29.49
	OND	12	15.38
	Ph.D.	0	00.00
4.	**Professional Qualification**		
	Probationer/Graduate	20	29.41
	Associate	20	29.41
	Fellow	5	7.36
	Others	4	8.88
	Total	**68**	**100.00**

(Source: Field Survey, 2022)

From Table 3, 27.3% of the respondents are familiar with the Sharpe ratio as a performance measurement tool, 9.1% confirmed their familiarity with the time-weighted rate of return, hold period return or yield performance, while 18.2% of the respondents identified their familiarity with covariance or coefficient of variation as a performance measurement tool. The result implies that there is a knowledge of performance measurement tools by the professionals interviewed.

Table 3 Familiarity with performance measurement tools

Options	Number	Percentage (%)
Sharpe Ratio	22	27.3
Time Weighted Rate of Return	7	9.1
Money Weighted Rate of Return	0	0.0
Jensen Ratio	0	0.0
Holding Period Return	7	9.1
Covariance	14	18.2
Coefficient of Variation	14	18.2
Treynor Ratio	0	0.0
Arithmetic Mean	7	9.1
Yield Performance	7	9.1
Total	**78**	**100**

(Source: Field Survey, 2022)

Table 4 shows that the vacancy rate for commercial property investments is below 20% in Phase 1 and between 20%-30% in the Ikate and Ikota zones of the Lekki axis respectively.

Table 4 Vacancy rate for Commercial property investments in Lekki

Vacancy Rate	Phase 1		Ikate		Ikota	
	Frequency	%	Frequency	%	Frequency	%
Below 20%	43	55	27	35	16	20
Between 20% - 30%	19	25	39	50	54	70
Between 30% - 50%	16	20	12	15	8	10
Between 50% - 70%	0	0	0	0	0	0
Above 70%	0	0	0	0	0	0
Total	**78**	**100**	**78**	**100**	**78**	**100**

(Source: Field Survey, 2022)

■5.0 DISCUSSION

5.1 What are the drivers of commercial (converted residential spaces) and residential property demand in the study area?

From Table 5, 33.3% of the respondents recognised that the business hub status is a factor driving the demand for commercial properties in the three zones. This is closely followed by the options of All of the above, Economies of scale and Space requirements of workspace respectively.

Table 5 Factors driving commercial property demand in the study area

Factors Driving Commercial Property Demand	Phase 1		Ikate		Ikota	
	Frequency	%	Frequency	%	Frequency	%
Travel time between home and work	6	8.3	0	0.0	0	0.0
Level of Infrastructure	12	16.7	0	0.0	0	0.0
Presence of Social Amenities	0	0.0	6	8.3	6	8.3
Business Hub Status	27	33.3	27	33.3	21	25.0
Economies of Scale	0	0.0	12	16.7	12	16.7
Prestige Symbol	6	8.3	0	0.0	0	0.0
Space Requirements of Workplace	0	0.0	12	16.7	12	16.7
State of the Economy	0	0.0	0	0.0	0	0.0
All of the above	27	33.3	21	25.0	27	33.3
Total	**78**	**100**	**78**	**100**	**78**	**100**

(Source: Field Survey, 2022)

From Table 6 41.7%, 25% and 33.3% of the respondents recognised that Prestige status, State of the economy and Infrastructure level/State of the economy as factors driving the demand for residential properties in the three zones respectively.

Table 6 Factors driving residential property demand in the study area

Factors Driving Residential Property Demand	Phase 1		Ikate		Ikota	
	Frequency	%	Frequency	%	Frequency	%
Level of Infrastructure	0	0.0	19	24.7	27	33.3
Quality and Conditions of Housing	0	0.0	13	17.0	0	0.0
Presence of Social Amenities	6	8.3	0	0.0	0	0.0
Security	0	0.0	6	8.3	0	0.0
Prestige Symbol	33	41.7	0	0.0	12	16.7
State of the Economy	6	8.3	20	25.0	27	33.3
All of the above	33	41.7	20	25.0	12	16.7
Total	**78**	**100**	**78**	**100**	**78**	**100**

(Source: Field Survey, 2022)

5.2 What is the user demand hierarchy of commercial and residential properties in the study area?

Table 7 shows that office spaces and shop spaces are more in demand in Phase 1, Ikate and Ikota respectively. Warehouses are the least demanded commercial property investment in the Lekki Axis.

Table 7 Popular commercial (including converted residential space) property type requests

User Demand Hierarchy of Commercial Properties in the Study Area	Phase 1		Ikate		Ikota	
	Selections	Rank Position	Selections	Rank Position	Selections	Rank Position
Shop Space	43	2	65	1	70	1
Office Space	60	1	55	2	55	2
Warehouses	65	4	50	4	45	4
Mall Spaces	50	3	42	3	60	3

(Source: Field Survey, 2022)

Table 8 shows that detached duplexes, terrace houses/duplexes and apartments are more in demand in Phase 1, Ikate and Ikota respectively. Bungalows are the least demanded residential property investment in the Lekki Axis.

Table 8 Popular residential property type requests

User Demand Hierarchy of Residential Properties in the Study Area	Phase 1		Ikate		Ikota	
	Selections	Rank Position	Selections	Rank Position	Selections	Rank Position
Apartments	43	3	45	3	55	1
Terrace Houses/Duplexes	50	2	60	1	50	2
Detached Duplexes	65	1	50	2	48	3
Bungalows	35	4	38	4	45	4

(Source: Field Survey, 2022)

5.3 What are the factors that determine the market performance of commercial and residential properties in Lekki?

From Table 9, Location, Level of infrastructure and all the factors combined are considered responsible for determining the market performance of commercial property investments in Phase 1, Ikate and Ikota respectively.

Table 9 Factors determining market performance of commercial property in Lekki

Factors Determining Market Performance	Phase 1		Ikate		Ikota	
	Frequency	%	Frequency	%	Frequency	%
Traffic Volume	6	8.3	0	8.3	0	0.0
Level of Infrastructure	12	16.7	0	33.3	0	0.0
Property Age	0	0.0	6	0.0	6	8.3
Location	27	33.3	27	16.7	21	25.0
Supply and demand of property	0	0.0	12	0.0	12	16.7
State of the economy	6	8.3	12	16.7	12	16.7
All of the above	27	33.3	21	25.0	27	33.3
Total	**78**	**100**	**78**	**100**	**78**	**100**

(Source: Field Survey, 2022)

From Table 10, Location, State of the economy and Supply and demand of properties are considered responsible for determining the market performance of residential property investments in Phase 1, Ikate and Ikota respectively.

Table 10 Factors determining market performance of residential property in Lekki

Factors Determining Market Performance	Phase 1		Ikate		Ikota	
	Frequency	%	Frequency	%	Frequency	%
Supply and demand of properties	0	0.0	19	24.7	27	33.3
State of technological integration	0	0.0	13	17.0	0	0.0
The property market growth level	6	8.3	0	0.0	0	0.0
Location	33	41.7	0	0.0	12	16.7
State of the economy	6	8.3	20	25.0	27	33.3
All of the above	33	41.7	20	25.0	12	16.7
Total	78	100	78	100	78	100

(Source: Field Survey, 2022)

5.4 What is the performance of commercial and residential property investments in the study area from 2016-2022?

Using the data on average rental and capital values for converted residential and residential properties in the study area, their performance was ascertained by Mean HPR, Standard Deviation, Coefficient of Variation and TWRR.

It is important to stress that the commercial property investments selected for these measurements are residential units now converted for commercial use. HPR was calculated using the average rent and capital value variables for each property. From the table below, Phase 1 had its 3- and 4-bedroom duplexes peak at their highest in 2017. For the Ikate zone, 3-bedroom peaked at its highest in 2022, while 4-bedroom peaked at its highest in 2019. Finally, the 3- and 4-bedroom duplex peaked at its highest in Ikota in 2018.

Table 11 HPR for commercial (converted residential spaces) property in Lekki

Year	Phase 1		Ikate		Ikota	
	3-bdr det. dplx	4-bdr det. dplx	3-bdr det. dplx	4-bdr det. dplx	3-bdr det. dplx	4-bdr det. dplx
2016	0.0	0.0	0.0	0.0	0.0	0.0
2017	15.6	14.0	12.1	10.0	13.8	10.1
2018	13.1	13.2	12.8	9.5	13.8	13.6
2019	12.4	4.5	11.1	14.5	9.5	11.8
2020	11.8	11.6	11.3	4.0	9.0	11.0
2021	3.8	4.2	3.6	13.5	12.2	9.8
2022	11.3	11.1	13.1	12.8	10.2	10.1

(Source: Field Survey, 2022)

From the table below, Phase 1 had its 2-bedroom flat, 3-bedroom flat, 3-bedroom duplex and 3-bedroom terrace at its highest performing rates in 2017, 2017, 2019 and 2022 respectively. Ikate Zone had its 2-bedroom flat perform maximally in 2019, while the others performed maximally in 2017. Finally, Ikota zone had its 2- and 3-bedroom flats perform maximally in 2017, its 3-bedroom duplex in 2019 and the 3-bedroom terrace in 2021.

Table 12 HPR for residential property in Lekki

Zone	Years	2-bdr flat	3-bdr flat	3-bdr det. dplx	3-bdr terrace dplx
Phase 1	2016	0.00	0.00	0.00	0.00
	2017	14.11	15.00	10.70	11.10
	2018	13.00	10.30	10.00	11.00
	2019	11.80	10.10	20.50	10.80
	2020	11.30	9.60	13.10	10.10
	2021	10.80	9.60	12.40	10.10
	2022	10.30	9.50	11.80	15.60
Ikate	2016	0.00	0.00	0.00	0.00
	2017	17.30	14.10	18.40	13.60
	2018	10.80	13.00	16.60	12.80
	2019	19.40	12.20	15.10	12.30
	2020	9.20	11.70	9.00	12.20
	2021	10.70	11.10	9.00	11.90
	2022	8.40	11.00	13.50	11.40
Ikota	2016	0.00	0.00	0.00	0.00
	2017	19.60	15.80	12.80	17.00
	2018	8.80	14.50	11.80	16.10
	2019	11.50	3.60	18.70	25.00
	2020	3.60	14.10	16.40	4.50
	2021	16.70	4.00	15.10	21.60
	2022	15.10	14.00	8.60	11.60

(Source: Field Survey, 2022)

In rating market performance, from Table 13, we see that under the residential average for the three locations within Lekki, the Ikota axis leads with an MPHR and TWRR average of 11.40 and 11.23. This is followed closely by Ikate at MPHR and TWRR averages of 10.87 and 10.75. Lekki Phase 1 comes in as third with MPHR and TWRR averages of 10.08 and 9.99. Under the commercial (converted residential spaces) average for the three locations, Ikota leads again with MPHR and TWRR averages of 9.63 and 9.54. Ikate follows with MPHR and TWRR averages of 9.16 and 9.05 and Lekki Phase 1 comes third with MPHR and TWRR averages of 9.04 and 8.92.

When comparing risk levels per property type (Standard Deviation), under the residential 2-bedroom apartment, Ikota has the highest risk at 7.11 and Lekki Phase 1 has the lowest risk at 4.67. Under the residential 3-bedroom apartment, Ikota has the highest risk at 6.60 and Lekki Phase 1 has the lowest risk at 4.48. Under the residential 3-bedroom detached duplex, Ikate has the highest risk at 6.26 and Lekki Phase 1 has the lowest at 6.04. Under the residential 3-bedroom terrace duplex, Ikota has the highest risk at 8.97, while Lekki Phase 1 and Ikate have the lowest risk at 4.72. The commercial (converted residential spaces) 3-bedroom detached duplex, Lekki Phase 1 has the highest risk at 5.62, while Ikota has the lowest risk at 4.73. Under the commercial (converted residential spaces) 4-bedroom detached duplex, Lekki Phase 1 has the highest risk at 5.40, while Ikota has the lowest at 4.38.

When comparing risk to return levels per property type (Coefficient of Variation), under the residential 2-bedroom apartment, Ikota is the highest at 0.66 and Lekki Phase 1 is the lowest at 0.45. Under the residential 3-bedroom apartment, Ikota is the highest at 0.70 and Ikate is the lowest at 0.45. Under the residential 3-bedroom detached duplex, Lekki Phase 1 and Ikate are the highest at 0.53 and Ikota is the lowest at 0.51. Under the residential 3-bedroom terrace duplex, Ikota is the highest at 0.65, while Ikate is the lowest at 0.44. The commercial (converted residential spaces) 3-bedroom detached duplex, Lekki Phase 1 is the highest at 0.57, while Ikota is the lowest at 0.48. Under the commercial (converted residential spaces) 4-bedroom detached duplex, Lekki Phase 1 is the highest at 0.64, while Ikota is the lowest at 0.46.

Table 13 Performance breakdown of property investments in Lekki

Location	Investment Type	Mean HPR	Standard Deviation	Coefficient of Variation	TWRR/ Geometric Mean
Phase 1, Lekki	Residential/2 Bedroom Apartment	10.18	4.67	0.45	10.10
	Residential/3 Bedroom Apartment	9.15	4.48	0.48	9.07
	Residential/3 Bedroom Detached Duplex	11.21	6.04	0.53	11.07
	Residential/3 Bedroom Terrace Duplex	9.81	4.72	0.48	9.72
	Residential Average	**10.08**			**9.99**
	Commercial (converted residential spaces) / 3 Bedroom Duplex	9.71	5.62	0.57	9.59
	Commercial (converted residential spaces) / 4 Bedroom Duplex	8.37	5.40	0.64	8.25
	Commercial Average	**9.04**			**8.92**
Ikate, Lekki	Residential/2 Bedroom Apartment	10.82	6.34	0.58	10.67
	Residential/3 Bedroom Apartment	10.44	4.73	0.45	10.35
	Residential/3 Bedroom Detached Duplex	11.65	6.26	0.53	11.50
	Residential/3 Bedroom Terrace Duplex	10.6	4.72	0.44	10.51
	Residential Average	**10.87**			**10.75**
	Commercial (converted residential spaces) /3 Bedroom Duplex	9.14	5.17	0.56	9.03
	Commercial (converted residential spaces) /4 Bedroom Duplex	9.18	5.35	0.58	9.07
	Commercial Average	**9.16**			**9.05**
Ikota, Lekki	Residential/2 Bedroom Apartment	10.75	7.11	0.66	10.56
	Residential/3 Bedroom Apartment	9.42	6.60	0.70	9.25
	Residential/3 Bedroom Detached Duplex	11.91	6.19	0.51	11.76
	Residential/3 Bedroom Terrace Duplex	13.68	8.97	0.65	13.37
	Residential Average	**11.40**			**11.23**
	Commercial (converted residential spaces) /3 Bedroom Duplex	9.78	4.73	0.48	9.69
	Commercial (converted residential spaces) /4 Bedroom Duplex	9.48	4.38	0.46	9.40
	Commercial Average	**9.63**			**9.54**

(Source: Field Survey, 2022)

6.0 CONCLUSION

This work sought to assess the market performance of commercial and residential property investments in Lekki Axis, Lagos, Nigeria. With Ikate and Ikota recording better market performances, it is believed that efforts should be steered towards identifying which appropriate property demand, degree of capital and trade-off between risk and reward should be allocated to any of the locations within the study area, before project execution.

The demand for commercial and residential property investments in an area should steer the commitment or involvement of property investors towards development in such areas. Demand is a good measure of the market's perspective concerning a good. If a specific property investment is in demand in an area, anything different from it would have a lower demand thus leading to increased vacancy rates and poor performance ratings. Most investors seek to recoup their capital invested in development projects, as soon as possible. The findings show that areas like Ikate and Ikota show a better overall performance, while all three markets command a respectable performance (assessment-wise) for commercial investment types. If the market is suitable for the investment type and the assessment has shown good performance, it should be prioritised above any other commercial (converted residential spaces) or residential investment type.

The investment risk and return tied to both commercial and residential property investments should rationally be considered by the investor before committing resources to its development. It is not enough that an area is prime. The probabilities of risk and return must be factored in the selection of which investment project best favours the investor, performance and profit-wise.

It is also recommended that the combinations of property investments must be considered if various investments in a location are to be projected. The combination impact of such investments when held as a portfolio must be considered, as a wrong combination of property investments can backfire on the investor's total investments, especially in a situation of global economic or regional political change. Thus, portfolio risk is reduced when property combinations are not affected by the same circumstances. The concept of efficient

frontier is a follow-up to the modern portfolio theory which identifies that an investor could fall into the less-risk-averse or more risk-averse classes and therefore suggests an efficient number of choices in constructing a portfolio, to achieve optimum risk and return (Otegbulu, 2022; Ganti, 2022). It is believed that some property investments which currently are not at an optimum, were at some point, maximising the tradeoff between risk and reward and thus, not below the efficient frontier. However, changes in property demand and economic impacts might have adversely influenced their holding period return in the long run. Also, it is believed that the choice to retain the combination of a portfolio that is below the efficient frontier in unfavourable markets is popular amongst private investors who may initially be willing to accept high risk, compared to institutional investors who tend to be risk-averse.

The twin combination of infrastructure and social amenities has been hailed as the genesis of growing property markets like Ikate and Ikota, the degree of its availability and quality acts as an indicator of economic growth and development (Iruobe & Ugwuejim, 2021). It is believed that the MPHR of the various property investments is influenced chiefly by the degree of infrastructure, availability of social amenities, business hub status and security in the various market zones. These factors are evergreen in their tendency to influence performance levels in the market zones.

The investor desires to meet his/her investment objective, year in and out and thus it is appropriate for such investor or his representative to manage his investments with the knowledge of the industry, zonal or local benchmarks, to ensure the trade-offs between risk and reward are beneficial to the investment and the objectives of the investor. In a non-monopolistic setting like Nigeria or an imperfect market like the Lagos property market, investors and property managers alike would have to rely on the piecemeal information on property performance benchmarks, traded or received locally from property agents, Estate Surveying firms or by real estate establishments with research forte in market analysis i.e., Estate Intel, Northcourt, etc., just to mention a few.

Tertiary institutions need to stress via the curriculum, the importance of the knowledge on performance measurement and its techniques in investment analysis. It is not sufficient to be able to interpret the market situation in terms of trade and profits alone, rather the property analyst should be able to interpret investment performance or possess information (past or current) on investment performance for specific property types and for various zones/locations.

The formulation of robust strategic property decisions is a key investment decision that the investor must set out to make from the outset. To meet portfolio objectives, the investor or his representative should seek to leverage the strengths and weaknesses of market behaviour, as well as the appropriate property, location of property and the degree of capital to be expended in such expenditure.

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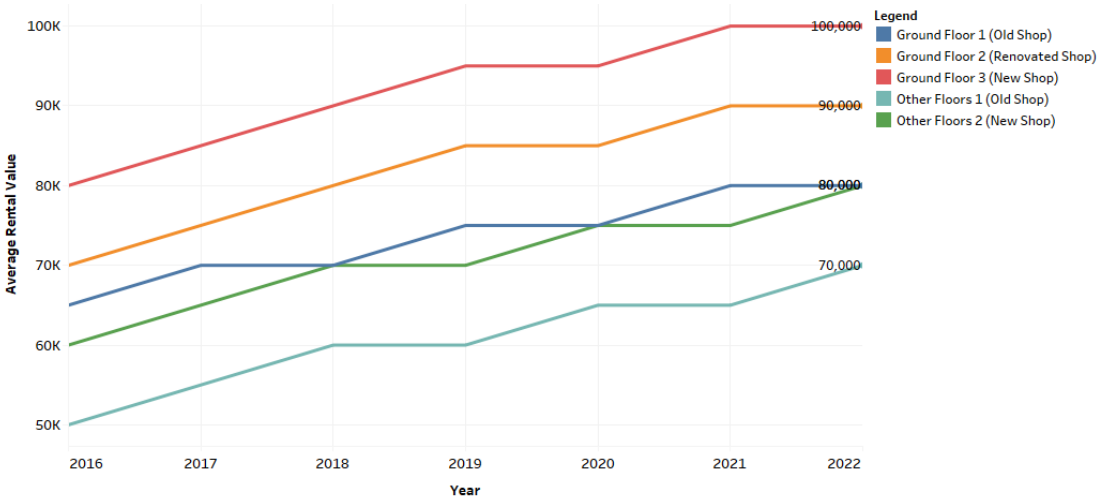
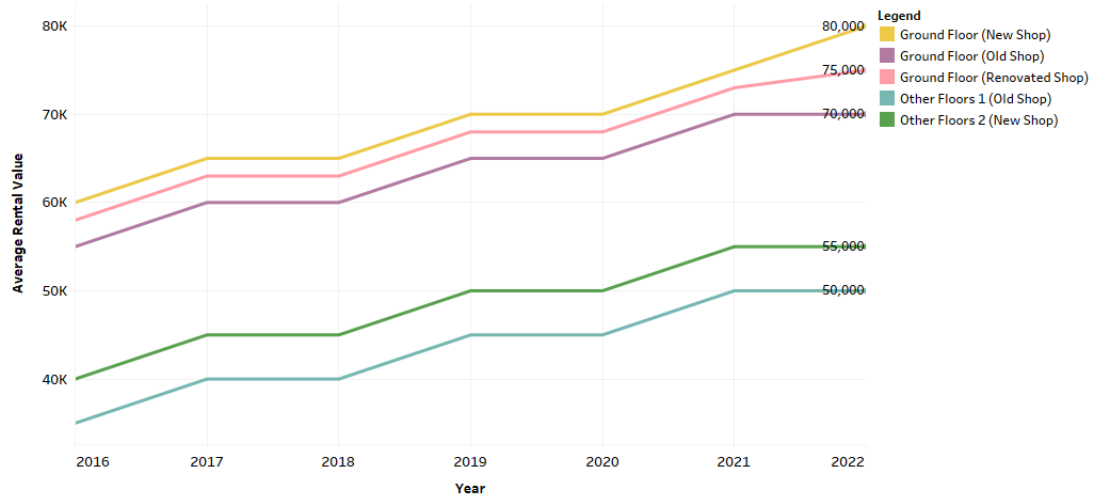
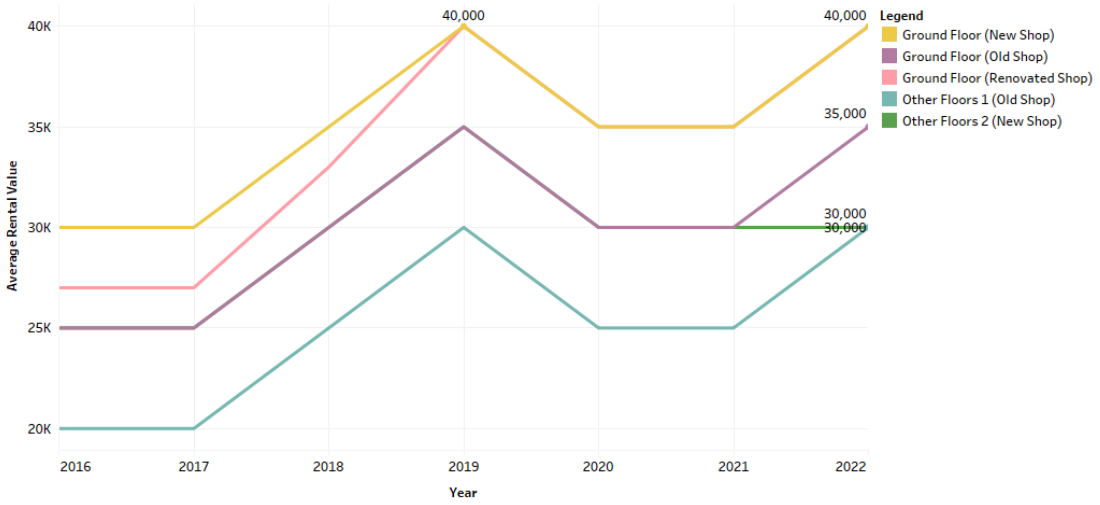
APPENDIX A
Average rent for shops in Lekki Phase 1, Ikate and Ikota.







APPENDIX B
Average rent per sqm on office grades in Lekki Phase 1, Ikate and Ikota