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ASSESSING RENTAL VARIATIONS IN THE COMMERCIAL PROPERTY MARKET OF ABEOKUTA, OGUN STATE

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Abstract

Urban property markets are dynamic and continuously changing driven by social, economic, infrastructural, and demographic processes. In particular, commercial property markets are sensitive to changes in demand, capital flows, and local market conditions, resulting in changes in rents and patterns of business activity. Hence, the goal of this research is to assess rental variation on Commercial Property Market in Abeokuta, Ogun State, focusing on Kuto and Lafenwa areas. A descriptive survey was used, with a questionnaire serving as the data gathering tool. Every fifth shop in a row was chosen using systematic random selection technique, and the occupants of the selected shop were administered a closed-ended questionnaire. The research findings revealed that despite the inadequate provision of some basic facilities like electricity supply and fire safety measures, rental values steadily increased in both markets, indicating sustained demand for commercial property. It was found that location was the most important factor in determining rental value. While demand and supply factors exerted more influence in Kuto, accessibility, particularly through rail transport was a much stronger factor in Lafenwa. The study concluded that there was rental growth in both markets, but the key drivers varied considerably by location, and it suggested that investors consider upgrading the market facilities and be mindful of the market environment and factors that influence rental value to ensure optimal performance of commercial property investments.

Keywords: *Commercial Property, Market, Rent, Variation.*

1.0 Introduction

Ojetunde et al (2013) noted that the study of rental variation in residential and commercial areas is imperative when investment performance analysis is to be carried out. Chin (2003) had earlier pointed out that the continuous change in pattern of property values in developing countries of the world makes the appraisal of rental values within its characteristics a necessity for achieving an accurate forecasting.

Ozyurt (2014) posited that the commercial property market is generally responsive to macroeconomic activity, while Kuryi-Wysocka et al. (2014) noted that the changes with their trajectory in the property market need a detailed analysis of the effect of both market and non-market elements. The slightest change in property value may cause a big random shift in other elements of the real estate market system, as noted by Radzewicz et al. (2011). Accordingly, Radzewicz (2013) noted that the property market is always changing due to the actions and conduct of market

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players as well as the impact of external factors, and that rent increase always have an impact on all kinds of real estate, albeit to differing degrees.

According to Anderson and West (2006), since commercial structures are primarily constructed for business purposes, changes are more noticeable there. While Higgins (2007) noted that a commercial property rental model created for one locality may not be suitable for evaluating the rental performance of commercial property in another due to differences in important rental determinants, Udoekanem et al (2014) also believed that rental growth determinants differ from locality to locality.

Harvey and Jowsey (2003) had observed that there are disparities in commercial property rental prices. This observation is based on the fact that in urban areas where the central business district has maintained its appeal, economic strength, and viability, the district is almost always located close to the city's transportation and traffic hub and at locations that are convenient and accessible to a large number of people. This creates the possibility of high volumes of retail and other commercial activities, which in turn justifies intensive land use practices, high rents, and high land values. Put another way, locations nearer the central business district often have the most lucrative usage choices, have the highest site values, and fetch the highest rental prices. As a result, there is a lot of bidding and counter-bidding between users and operators for the sites because of the economic potential accessible to users. This procedure often leads to patterns of commercial land use where office and retail space are distributed based on the different operators' ability to pay rent. Due to constant changes, such as growth or changes in rental rates, this pattern is seldom stable. Therefore, the primary focus of this study is the commercial property markets in the Kuto and Lafenwa central business districts of Abeokuta, with the aim of examining the causes of rental variance.

2.0 Literature Review

While rents passing on properties are shown to be influenced differently by the variety of real estate, any ongoing pattern or change in the general direction of the real estate market is considered a trend (Shapiro et al. (2009). The rental value of such a property may be influenced by a variety of intrinsic and extrinsic factors, including the property's class, age, construction details and finishing-material quality, number of storeys, size and form. Enever and Isaac (2002) previously stated that the size of an office or retail space increases with quantity as a common item, and the size of office and retail space has some impact

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on the rental pricing of such properties. However, Shapiro et al. (2009) make the straightforward claim that a commercial property's occupants are more prepared to pay rental rates if it can earn more per square meter. McCartney (2012) also estimated a rent determination model for the office market in Dublin based on a two-stage error-correction mechanism that involved estimation of a long-run equilibrium rent equation and a short-run rent adjustment process. Chin (2003) examined the relationship between the movements of office rental rates in five Asian cities of Singapore, Hong Kong, Taipei, Kuala Lumpur, and Bangkok over the period 1988–2001. He found that changes in floor space and prime lending rates were the main determinants of office property rental values in these cities. While the short-run model showed a relatively modest rate of rent adjustment in the Dublin office market, the long-run analysis showed that office demand in Dublin is comparatively inelastic. He concluded that various variables affect rental increase in different localities.

Nwuba (2008) assessed office rental movements in the central area of Abuja, Nigeria from 2000 to 2007 in order to calculate rental growth rates. Whether the rental growth rates were substantial and whether there was a significant gap between the rental growth rates and the CPI inflation rates were the main issues that were answered. According to the findings, office rents continued to rise over the research period, but at slower rates than the overall rate of inflation. Although there was no discernible difference between the growth rates and inflation rates, rental growth rates were reported to be statistically significant. The movement of office rentals showed a strong positive linear connection with time, which may suggest that office rents are increasing considerably over time.

In microeconomics, the setting of property rental rates is based on supply and demand. Supply is constrained by available resources and technology, whereas demand is related to needs and is only constrained by people's capacity and willingness (Sloman, 2006). Conversely, rental values are the going rate for occupying a piece of real estate (per year). Rental value is thus influenced by the interplay between supply and demand, much as market pricing. Office space, for instance, is a component of production as it is commercial real estate. In the meantime, demand is derived for land as a factor of production. Professionals, bankers, financiers, and other managerial and administrative functionaries are the main users of office spaces. Therefore, when paired with other production parameters, the demand for

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products and services determines the need for more space. A change in the market's and/or industry's stage of growth may also affect the amount of space needed and the rental prices. According to Evans et al. (2004), choosing a site is crucial for every firm, and they look for a property that best suits their requirements. The placement of the office may also be decided by a "trade-off" between the expense of transportation and the distance to the Central Business District (CBD), as Von Thunen's model suggests that rent prices vary with distance from a major commercial center. A negative rent gradient with distance from the metropolitan center was also highlighted by Alonso in 1964. Importantly, Jones and Dunse (2002) have demonstrated that rents may rise as one approach major highways and motorways out of the central business district. This accessibility factor, which is more closely related to the location of industrial warehouses, is better explained in the context of the reasons for the variation in rental values.

Land and property in general cannot be replaced. The desire to match specific attributes to specific tenant's needs, such as size, layout, age, technology, and amenities, limits the ability to switch between properties. Office occupants are sensitive to certain building qualities and may be ready to pay extra rent for them, in addition to location. Therefore, among other things, real estate that satisfies these criteria would be highly sought after and may fetch higher rental prices. While Ajibola et al. (2013) found that infrastructure including roads and water were rated as the most significant elements influencing rental property prices in Lagos, Davies and Shapiro (2005) noted that strong neighborhood infrastructure has an impact on property values. According to Anyanwu and Erhijakpor (2010), road infrastructure lowers transportation costs and raises rental values in areas with good roads, which in turn affects the rental or capital values of properties located there.

Another area of concern is safety of lives and properties. Ajibola et al. (2014) performed research on the impact of militant actions on rental values in Port Harcourt, which support this claim. Orekan (2014) in turn, utilized Kano as a case study and found that the actions of the Islamic militant organization (Boko Haram) caused a fall in rental prices, and that militants' activities had negative influence on rental values in the locations where they occurred. The preceding studies undertaken by Bello (2011) and Ceccato and Wilhelmsson (2011) had also found that crime had a negative effect on property prices. This suggests that locals are worried about their safety and would rather

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pay more for real estate in a neighborhood that is safe than one that is notorious for criminal activities.

3.0 Methodology

Retail shops in Kuto market and Lafenwa market in Abeokuta, Ogun State were selected for the study. There are 235 retail shops in Kuto market and 155 in Lafenwa market, making up the estimated 390 retail stores in the survey area. A closed-ended questionnaire was given to the occupiers of the selected retail shops, and every fifth shop in a row was selected using a systematic random sample technique. A total of 78 validly completed questionnaires were retrieved; 47 at Kuto market and 31 at Lafenwa market. To examine changes in the rental prices of the chosen shop property in the research region, descriptive statistical tools including trend analysis, weighted mean score (WMS), percentage (%), and simple frequency distribution (SFD) were used. A 5-point Likert scale comprising 'Strongly Disagree (SD)', 'Disagree (D)', 'Unsure (U)', 'Agree (A)', and 'Strongly Agree (SA)' with corresponding weight values 1, 2, 3, 4, and 5, was used to gauge respondents' views for weighted mean score (WMS) data.

For trend analysis,

$$\boldsymbol{\gamma = mX + b}$$

Where;

y denotes the average rental value

X is the period under review (2010 - 2019),

m is the slope of the trend line which measures the pattern and direction (±) of changes in the b represents the intercept (b= Y - mX) of the trend.

4.0 Results and Discussion

Socio-economic characteristics of the respondents

Table 1 presents the characteristics of respondents. In Kuto and Lafenwa markets, female respondents were in the majority, accounting for 74.5% and 74.2% respectively. On the age distribution of the respondents, an overwhelming majority of respondents were 31–40 years of age, accounting for 40.4% of respondents in Kuto and 41.8% of respondents in Lafenwa. Overall, only a small proportion of respondents, irrespective of market, were over the age of 60 years (Kuto 1.2% and Lafenwa 6.5%). In terms of length of years of operating in the respective markets, the majority of respondents from both the Kuto and Lafenwa markets reported being in the market for over 11 years (68.1% in Kuto and 67.7% in Lafenwa), supporting that long-term traders were present in both markets. In regards to business type, service providers were dominant in both markets (72.3% in Kuto and 64.5% in Lafenwa), whereas sale of consumable goods was reported by 27.7% and

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35.5% of respondents in Kuto and Lafenwa respectively.

Table 1: Characteristics of respondents in Kuto and Lafenwa markets

Variables	Categories	Kuto		Lafenwa	
		Freq.	(%)	Freq.	(%)
Gender	Male	12	25.5	8	25.8
	Female	35	74.5	23	74.2
	Total	47	100	31	100
Age	21 – 30 years	7	14.9	6	19.4
	31 – 40 years	19	40.4	13	41.8
	41 – 50 years	10	21.3	10	32.3
	61 years and above	11	23.4	2	6.5
	Total	47	100	31	100
Years of Usage	Less than 5 years	5	10.6	3	9.7
	5 – 10 years	10	21.3	7	22.6
	11 – 15 years	15	31.9	12	38.7
	16 years and above	17	36.2	9	29.0
	Total	47	100	31	100
Nature of Business	Sales of consumable goods	13	27.7	11	35.5
	Production of services	34	72.3	20	64.5
	Total	47	100	31	100

Source: Field Survey, 2025

Categories of Shops in Kuto and Lafenwa Markets

Table 2 reveals the distribution of shop types in Kuto and Lafenwa markets, showing some similarities and differences. In both markets, locked-up shops are the most common, accounting for 48.9% in Kuto and 51.6% in Lafenwa, indicating traders' preference for more secure and permanent business spaces. Local shops follow closely, representing 38.3% in Kuto and 32.3% in Lafenwa, reflecting the continued relevance of smaller and more accessible retail outlets. Supermarkets make up a smaller share in both markets, with 12.8% in Kuto and 16.1% in Lafenwa, suggesting a moderate presence of larger, modern retail formats. Mobile shops are absent in both locations. Overall, the table highlights that while both markets are dominated by locked-up shops, local shops still play a significant role, with supermarkets contributing only modestly to the retail structure.

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Table 2: Categories of shops in Kuto and Lafenwa markets

Variable	Kuto Market		Lafenwa Market	
	Frequency	Percentage	Frequency	Percentage
Mobile Shop	-	-	-	-
Locked-up Shop	23	48.9	16	51.6
Supermarket	6	12.8	5	16.1
Local Shop	18	38.3	10	32.3
Total	***47***	***100***	***31***	***100***

Source: Field Survey, 2025

Condition of Shops in Kuto and Lafenwa Markets

Table 3 shows that shop condition factors influencing rental values vary slightly between Kuto and Lafenwa markets. In Kuto, *doors and windows* ranked highest (mean 4.47), followed by *layout and design* (4.17) and *waterproofing* (4.13), indicating stronger emphasis on physical structure, aesthetics, and durability. In contrast, respondents at Lafenwa placed the greatest importance on *waterproofing* (4.64), with *doors and windows* (4.48) and *layout and design* (4.45) following closely, suggesting that protection against leakage and functionality outweigh aesthetic appeal in this market. Mid-ranking factors such as *space* and *size* were valued in both markets, while *finishes and fittings* were of lesser concern. At the lower end, *parking space*, *facility provisions*, and *electricity supply* attracted limited attention, while *security* and *fire safety measures* were consistently the least prioritized. Overall, the comparison highlights that Kuto occupants value structural aesthetics and design more, reflecting the relatively organized setting of the market, whereas Lafenwa respondents emphasize waterproofing and structural resilience, pointing to challenges with building quality in that environment.

Table 3: Condition of shops in Kuto and Lafenwa Markets

Condition	Kuto Market			Lafenwa Market		
	ΣWF	Mean	Ranking	ΣWF	Mean	Ranking
Doors and Windows	210	4.47	1st	139	4.48	2nd
Layout and Design	196	4.17	2nd	138	4.45	3rd
Water proofing	194	4.13	3rd	144	4.64	1st
Space	180	3.83	4th	107	3.45	5th
Finishes, Fittings and Furniture	176	3.74	5th	104	3.35	6th
Size	158	3.36	6th	113	3.65	4th
Parking Space	151	3.21	7th	91	2.93	7th
Facility	144	3.06	8th	73	2.35	9th
Security	137	2.91	9th	63	2.03	10th
Electricity supply	128	2.72	10th	87	2.81	8th
Fire Safety measure	100	2.13	11th	39	1.26	11th

Source: Field Survey, 2025
Note: Likert Scale: 5= Excellent 4= Good 3= Fair 2= Bad 1= Good

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Trend in Rental Values of Shops in Kuto and Lafenwa Market

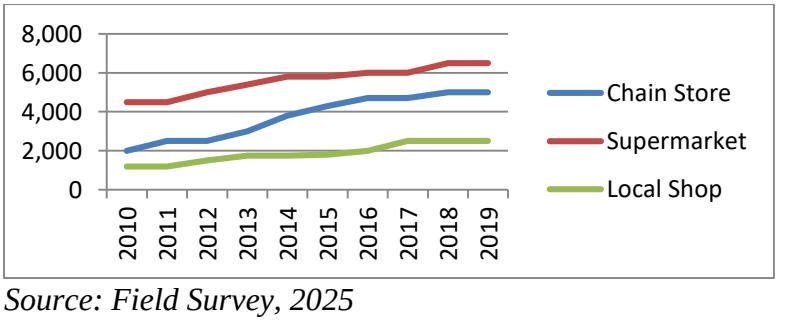
The rental value trend of shops in Kuto market is shown in Table 4. The graph indicates that there was a sharp increase in rental values for Kuto store properties between 2010 and 2014, and that these rental prices continued to climb until 2019. Assuming that every other element influencing rental prices stays the same, this may be ascribed to the many advantages of the location, accessibility, transit, and neighborhood features (see Fig. 1). However, Table 5's graph indicates that there was a sharp increase in rental prices for retail premises between 2010 and 2012. The rental value in the study region increased steadily between 2013 and 2015, and it has continued to do so till 2019. Assuming that every other element influencing rental prices stays the same, this may be ascribed to the many advantages of the location, accessibility, transit, and neighborhood features (see Fig. 2).

Table 4: Trend in Rental Value of Shop in Kuto Market (₦ per/month)

Year	Chain Store		Supermarket		Local Shop		Mean
	Rent	% Change	Rent	% Change	Rent	% Change	
2010	2,000	-	4,500	-	1,200	-	2,567
2011	2,500	25	4,500	-	1,200	-	2733
2012	2,500	-	5,000	11	1,500	25	3,000
2013	3,000	20	5,400	8	1,750	17	3,383
2014	3,800	26	5,800	7	1,750	-	3,783
2015	4,300	13	5,800	-	1,800	3	3,966
2016	4,700	9	6,000	3	2,000	11	4,233
2017	4,700	-	6,000	-	2,500	25	4,400
2018	5,000	6	6,500	8	2,500	-	4,667
2019	5,000	-	6,500	-	2,500	-	4,667

Source: Field Survey, 2025

Figure 1: Rental value trend of shops in Kuto market



Source: Field Survey, 2025

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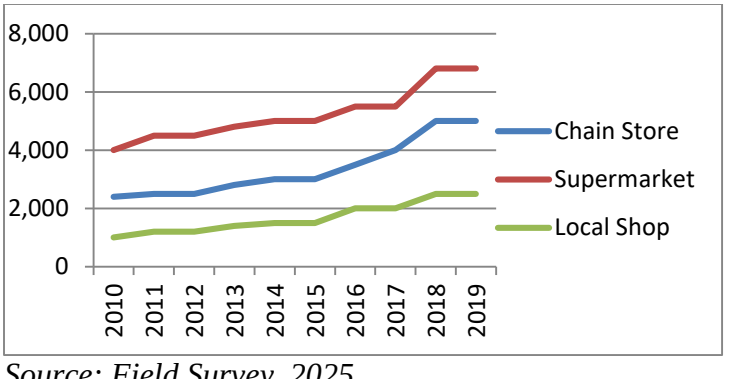
Table 5: Trend in Rental Value of Shops in Lafenwa market (₦ per month)

Year	Chain Store		Supermarket		Local Shop		Mean
	Rent	% Change	Rent	% Change	Rent	% Change	
2010	2,400	-	4,000	-	1,000	-	2,467
2011	2,500	4	4,500	13	1,200	20	2,733
2012	2,500	-	4,500	-	1,200	-	2,733
2013	2,800	12	4,800	7	1,400	17	3,000
2014	3,000	7	5,000	4	1,500	7	3,167
2015	3,000	-	5,000	-	1,500	-	3,167
2016	3,500	17	5,500	10	2,000	33	3,667
2017	4,000	14	5,500	-	2,000	-	3,833
2018	5,000	25	6,800	24	2,500	25	4,767
2019	5,000	-	6,800	-	2,500	-	4,767

Source: Field Survey, 2025

Figure 2: Rental Value Trend of Shops in Lafenwa market



Source: Field Survey, 2025

Factors influencing Rental Variation in shops at Kuto and Lafenwa markets

In Table 6, a comparison of the rankings of the factors affecting rental values across markets Kuto and Lafenwa demonstrates similarities and differences. Both markets agree on ranking location highest in both mean scores (Kuto=4.68, Lafenwa=4.94), also, accessibility ranked high in both markets (3rd ranking in Kuto=4.57 and 2nd-ranked at Lafenwa=4.87), which suggests that movement of people and goods is a salient consideration. Divergences in the ranking of the other factors varied. The second mean factor in Kuto is demand and supply (4.60) but this was 7th in Lafenwa (4.51), meaning that market forces have a relatively stronger weighting in Kuto than Lafenwa. Facilities and amenities are next in importance in Kuto (5th ranking, 4.45) but this meant much less in Lafenwa, being ranked (10th, 4.06). Similarly, neighbourhood and transportation have higher weighting in Lafenwa (3rd and 4th) versus Kuto (6th and 7th). Building factors (age, taxation, contractual) were also ranked lower in both markets, although contractual and policy factors vary, with Kuto (11th, 3.09) compared to Lafenwa 8th (4.42). Therefore, the findings indicate that while both markets place high weights on location and accessibility, Kuto traders are mindful of market

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and amenities while Lafenwa traders pay more attention to other neighbourhood and policy related characteristics.

Table 6: Factors influencing rental variation in shops at Kuto and Lafenwa markets

Factors	Kuto Market			Lafenwa Market		
	ΣWF	Mean	Ranking	ΣWF	Mean	Ranking
Location	220	4.68	1st	153	4.94	1st
Demand and Supply	216	4.60	2nd	140	4.51	7th
Accessibility	215	4.57	3rd	151	4.87	2nd
Number of Floor	213	4.53	4th	144	4.65	5th
Facilities/Amenities	209	4.45	5th	126	4.06	10th
Neighbourhood Characteristics	202	4.30	6th	149	4.81	3rd
Transportation	196	4.17	7th	147	4.74	4th
Building Attributes e.g. Age	176	3.74	8th	142	4.58	6th
Taxation and Inflation	173	3.68	9th	132	4.26	9th
Management Services	157	3.34	10th	113	3.65	11th
Contractual and Policy factor	145	3.09	11th	137	4.42	8th

Source: Field Survey, 2025

Note: Likert Scale: 5= Very High 4= High 3= Unsure 2= Low 1= Very Low

4.1 Discussion of Findings

This study identified key influences on rental prices in Kuto and Lafenwa markets, and their interpretation has remained consistent with existing theories whilst also showing space-specific differences. In both markets, location and accessibility were the strongest determinants of rental values, which corresponds with previous studies. Von Thünen's rent gradient model and its extension by Alonso suggested that rents decline with distance from commercial centres, while Evans et al. (2004) and Jones and Dunse (2002) demonstrated extensive influences of road accessibility on rent. The high ranking of these factors in both Kuto and Lafenwa supports that the movement of people and goods is still central to rental determination and underlines a more general economic principle that the value of space is a reflection of savings on the cost of transport and locational benefits (Sloman, 2006).

The rental increase observed within the period 2010-2019 also supports Shapiro et al. (2009) and Nwuba (2008), who reported that rent is subjected to increase as long as there is presence of fluctuation in economic condition at a given time. McCartney's (2012) findings

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of a slow but consistent rental adjustment in Dublin's office market fits well with the systematic rent increases in shop rental levels at Kuto and Lafenwa market. This emphasizes that commercial rents are likely to rise, independent of the size of a market, over the long run.

The differential ranks on other factors are still reflective of commercial property demand. In Kuto, demand and supply of the shops and provision of facilities and amenities ranked higher. This reveals that the rental price for commercial property is due to property market competition and the facilities and features provided in property. This supports Enever and Isaac (2002) and Ajibola et al. (2013), where the elements of distance can be important factors influencing rental variation. In Lafenwa, characteristics of the neighbourhood, transportation, and contract or policy factors were highly ranked. This is also consistent with Chin (2003) and McCartney (2012), who articulated that local conditions led to variations in rental growth between neighbourhoods. This may also indicate, all things considered, broader environmental and regulatory aspects may hold more importance compared to forces within the market.

The rating on shop condition also affirms the importance of functional attributes of property. Many of the top-rated spaces were waterproofing, doors, windows and layout. This supports Davies and Shapiro (2005) and Ajibola et al. (2013), both of which indicated that the physical quality or condition of infrastructure can influence rental performance. The relatively low ranking of security and fire safety is noteworthy, particularly given studies by Bello (2011), Ceccato and Wilhelmsson (2011), and Ajibola et al. (2014), which showed the negative effects of insecurity and conflict on property values. This suggests that there is either underinvestment in these aspects or that tenants prioritize immediate usability features over latent risks.

5.0 Conclusion and Recommendations

This study examined the determinants of rental variations in Kuto and Lafenwa markets within Abeokuta, Nigeria, highlighting both shared and divergent factors influencing commercial property values. The results confirm that location and accessibility remain the most significant drivers of rent in both markets, consistent with established economic and property valuation theories. However, market-specific differences emerged: while Kuto rentals are more sensitive to demand-supply dynamics and

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property amenities, Lafenwa rents are more strongly shaped by neighbourhood conditions, transportation, and policy-related issues.

The upward trend in rental values across both locations between 2010 and 2019 reflects broader market growth patterns, indicating that commercial property values continue to rise steadily with economic and urban development. The findings also stress the importance of functional property attributes such as waterproofing, doors, and layout, while revealing a relative neglect of security and fire safety considerations. Therefore, this study noted that while fundamental determinants like location applies widely, each market exhibits unique dynamics that require context-specific strategies. For property managers, this calls for nuanced approaches in investment decisions, urban planning, and regulatory frameworks to ensure sustainable and equitable growth of commercial property markets.

References

Ajibola, M., Awodiran, O. and Salu-Kosoko, O. (2013). Effects of infrastructure on property values in unity estate, Lagos, Nigeria. *International Journal of Economy, Management and Social Sciences* 2 (5) 195-201

Ajibola, M., Ebikefe, A., and Awodiran, O. (2014). Militant activities and property values in Port Harcourt, Rivers State. *American International Journal of Social Sciences*, 3 (1) 118-129.

Anderson, S.T. and West, S.E. (2006). Open space, residential property values, and spatial context. *Regional Science and Urban Economics*, 36(6) 773-789.

Anselmsson J. (2006). Sources of customer satisfaction with shopping malls: a comparative study of different customer segments. *International Journal of Retail, Distribution and Consumer Research*, 16 (1): 115–138.

Appraisal Institute (2001). The appraisal of real estate. 12th edition, Appraisal Institute, Illinois, USA.

Bello, V.A. (2011). The impact of urban crime on property values in Akure, Nigeria. Bridging the gap between cultures FIG Working Week. Marrakech, Morocco: FIG Working Week.

Boon, F. N. and Higgins, D. (2007). Modelling the commercial property market: an empirical study of the Singapore office market. *Pacific Rim Property Research Journal*, 13(2) 176–193.

Ceccato, V. and Wilhelmsson, M. (2011). Impact of crime on apartment prices: evidence from Stockholm, Sweden. *Human Geography*, 93(1) 81-103.

Chin, H.W. (2003). Macro-economic factors affecting office rental values in Southeast Asian cities: the case of Singapore, Hong Kong, Taipei, Kuala Lumpur and Bangkok, Paper presented at the *9th Pacific Rim Real Estate Society Conference* held in Brisbane, Australia.

Enever, N. and Isaac, D. (2002). The valuation of property investments, (5th ed.) Estate Gazette, London, UK.

Harvey, J. and Jowsey, E. (2003). Urban land economics (6th ed). London, Palgrave Macmillan

Johnson, T., Davis, K. and Shapiro, E. (2005). Modern methods of valuation of land, houses and buildings. Estate Gazette (London) and EPP Books Services (Ghana).

Ilaro Journal of Environmental Research & Development (2025) 7 (1), 44– 56
ISSN: 2736-0814

Jones, D. Dunse, G. and Jones, A. (2002). The importance of property-specific attributes in assessing CBD office building quality. *Journal of Property Investment and Finance*, 23(5) 424-444.

Kuryj-wysocka, O., Kuryj, J., and Wisniewski, R. (2014). The dynamics of real estate field of value. *Real Estate Management and Valuation*, 22(4) 105 – 113.

McCatney, J. (2012). Short and long-run rent adjustment in the Dublin Office Market. *Journal of Property Research*, Vol. 29 (3) Pp. 201- 226.

Nwuba, C.C. (2008). An analysis of location differences in trends in house rents in Kaduna, Nigeria, 1986-2003. *The Estate Surveyor and Valuer*, *27*(1) 64-71.

Ojetunde, I., Popoola, N. I., & Kemiki, O. A. (2012). On the Interaction between the Nigerian Residential Property Market and the Macroeconomy.

Oni, A.O. (2009). Developing predictive models of commercial property values in emerging economy: Case study of Ikeja, Nigeria.

Orekan, A. A. (2014). The impact of social unrest on property values in Kano Metropolis, Nigeria. *Journal of Environmental Science, Toxicology and Food Technology*, 8(9) 44-49.

Ozyurt, S. (2014). Spatial dependence in commercial property prices: micro evidence from Netherlands. European Central Bank Working Paper Series No. 1627

Radzewicz, A. (2013). Real estate market system-phase space theory approach. *Real Estate Management and Valuation*, Vol. 21 (4) Pp. 87 – 95.

Radzewicz, A., Renigier-bilozor, M. and Wisniewski, R. (2011). From uncertainty to efficiency of the real estate market. *The European Real Estate Society Conference*

Shapiro, E., Davies, K. and Mackmin, D. (2009). Modern methods of valuation, 10 editions. EG Books. London, UK.

Sloman, J. (2006). Economics, 5th edition, Prentice-Hall.

Udoekanem I. Ogbonna, D., Amangabara, G., and Ekere, T.O. (2014). Effect of land titles registration on property investment in Nigeria. *International Journal of Advanced Studies in Economics and Public Sector Management*, 5(2) 81-94.