Full paper

International Journal of Real Estate Studies

INTREST

Proximity to Retail Outlets and Residential Property Rental Values in Akure, Nigeria

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Article history: Received: *01 July 2025* Received in revised form: *02 March 2026*
Accepted: *04 May 2026* Published online: *30 June 2026*
DOI: https://doi.org/10.11113/intrest.v20n1.432

Abstract

Location and neighbourhood characteristics are important factors to consider in real estate investment, as the composition of the physical and locational environment can influence the extent of desirability. This study examines the effect of the attachment of retail shops on residential property rental prices. Using a cross-sectional survey research, this study divided Akure into three population density zones to assess how the contiguous development of attached retail shops affects residential rental prices in each of the zones. Independent sample T-test was used to compare the residential property rental prices across the zones. Results of the analysis revealed that in the high population density zone, there is no statistically significant difference in the rental prices of residential properties with retail shop attachment and those without retail shop attachment. In the medium-density zone, it was revealed that the rental prices of residential properties with retail shop attachments are marginally lower than those without the attachments, which is statistically significant at $p < 0.050$. In the low-density zone, rental prices of residential properties that are without retail shop attachments are statistically higher than those with the attachments. This study, therefore, concludes that, in examining the effects of retail shop attachments on residential property rental prices, the population density of the study area is an important factor that could influence the result. It is therefore recommended that planning authorities in Akure, Nigeria, should ensure close monitoring of the development of residential neighbourhoods, to prevent unregulated attachment of retail shops that could in turn, have unanticipated effects on the prices of residential neighbourhoods.

Keywords: Residential neighbourhoods, Rental prices, Retail attachment

1.0 INTRODUCTION

Cities constitute the built environment where there is a spatial configuration of different housing, working buildings, recreational areas, and other types of developments with technical infrastructure connecting these functions (Min, et al., 2007). Meanwhile, housing commands a high requirement on any land due to its extensive and bulky needs in the environment but also relies on the interrelationship with other land uses, like commercial land use, in optimizing its values.

In spite of the need for planning schemes for land use and development in an environment, it is not unusual to have the occurrence of mixed land uses which might have been permitted within the plan for such area to have a functional neighbourhood and there are instances where it comes as a result of the violation of the existing neighbourhood plan (Gimba, et al., 2019). In developing countries like Nigeria, this could be associated with violation of the neighbourhood plan, but could be justified as Min, et al. (2007) established that urban space usually experiences dynamic change as it grows in line with differential space use, thus affecting land use, location and value distribution.

Notwithstanding, Aydin, et al., (2011) expressed that part of the policy goals of most urban areas is to restrict and isolate commercial development from being excessively in close proximity to residential properties. This is, however, not to downplay the importance of commercial activities for an efficient residential neighbourhood in reducing the cost of commuting to the city center for commercial activities and facilitating a viable and attractive residential area. Despite this, Aydin, et al., (2011) echoed that the location of commercial developments close to a residential property could have implications on the desirability of the residential properties, which might not be unrelated to the fact that competition for the land space among different uses is connected with the ability of use to edge out others in terms of demand, for the highest and best use (Adebayo & Ogunleye, 2014; Gimba, et al., 2019).

Meanwhile, there are situations where there is a large-scale commercial encroachment into residential neighbourhoods, resulting from pressure on the city center as identified in studies like Tiemann (2020) and Aziz, et al., (2020). In Nigeria, however, such is not the only case as many residential property owners in residential neighbourhoods arbitrarily attach retail shops to their buildings or construct some retail stores in front of the residential buildings, for commercial uses (Adebayo & Ogunleye, 2014; Sa'ad et al., 2024). While rents

receivable from such retail stores might not be as high as the commercial centers of the city, it is viewed as an additional income to the property owner and eases the need to overly depend on the commercial nerves of the city for retailing.

Despite these benefits, the presence of commercial activities in a particular place is an attraction for an increase in traffic of people to the location, which some residential property consumers might find undesirable for their safety and privacy. Thus, as desirability reduces, the level of demand for such residential property could drop, thereby affecting the rent receivable. This is confirmed in the study of Ma and Li (2017), where it was discovered that a drop in demand for a property reduces its value. Ma and Li (2017), like other foreign and local studies, paid attention to the presence of a major commercial land use, which might not be the same as what occurs in developing cities in Nigeria, where pockets of retail stores are found in different parts of many residential neighbourhoods, creating a research gap in this perspective. On the corollary, the presence of commercial activities in a residential area could be one of the factors that attract some residential property consumers to the area, where the study of Aliyu, et al., (2018) confirmed that nearness to retail shops increases the demand for residential accommodation, but how this retails shops attachment to residential properties could affect the rental prices of the latter is scarcely examined in the existing literature.

Considering research on this in a developing city like Akure is also required because, as residential development expands into new areas, commercial development emerges contiguously (Sa'ad, et al., 2024). This is also evident as seen in the mixture of land uses in the city, which cannot be without its attendant resultant effects on the prices of residential properties. Furthermore, there are areas, hitherto dominated by residential properties, that are experiencing rapid development of commercial properties and there are some residential properties that are experiencing contiguous commercial development, where some residential properties are partly or fully converted to retail shops for commercial activities, especially in the high-density zone. Also, there are areas expected to be majorly of commercial development but are also not without conspicuous residential developments, creating a problem of analyzing the land prices based on the influence of potential development of other land uses (Gimba, et al., 2019).

This phenomenon tampers with the spatial configuration, which might have been occasioned by unguided development patterns, especially by individual property developers. The vast majority of studies on the relationship between the effect of proximity to a commercial development on residential land values have only focused on a particular major commercial development in a residential environment, like shopping malls (Bowes and Ihlanfeldt 2001; Batalhone, et al., 2002; Matthews 2006 & Sale 2015), where other commercial developments, like lock up shops, retail shops and retail attachments that are close to the residential properties, which are common in developing environment like Akure, Nigeria are not readily available. This study, therefore, aims to consider the effects of the closeness to pockets of commercial development like retail stores within residential neighbourhoods, with a distinction from other similar studies by considering the three major population density zones, on the rental prices of the residential properties in the study area.

■2.0 LITERATURE REVIEW

Current trends of urbanization and growth show that commercial developments are no longer exclusively considered inherently conflicting with residential uses. In fact, striking a balance between the two uses is regarded as mutually beneficial, as commercial owners will have increased access to potential workers and consumers nearby, while people living in the residential properties have better access to retail shops and services (Yang, et al., 2015). Mixed land use in a neighbourhood has been seen through previous studies to have the potential of creating a sustainable environment, resulting in less usage of automobiles in covering long distances, air, pollution, transport cost of movement between different uses (Cervero and Kockelman, 1997; Song & Knaap, 2004; Duncan, et al., 2010).

The choice of residential location by individuals could be influenced by a number of factors, such as environmental security and available facilities. Aliyu et al., (2018) maintained that the socioeconomic characteristics of individuals, like the income level, number of family members, and social status, can also influence the residential choice of people. This was also established in the findings of Jordan, et al., (2004) that the socio-economic characteristics influence the choice of residential location, especially as high-income earners have the means of affording the cost of living farther away from the business district. As found in Cuberes and Roberts (2015), this is also justified by the constraints that the low-income earners have from residing in the high-income areas, in the low-density zones, thus limiting them to stay in the high-density area. These same factors afford the high-income earners the opportunity of staying farther away from the high-density zone (Aliyu, et al., 2018 & Gomes, 2020). By implication, the type of residential neighbourhood determines the class of people, which also influences the nature of land use development, contributing to mixed land uses seen in many parts of cities, though there are other factors that could contribute to such mixed uses.

Stull (1975) carried out a study on the impact of commercial development on residential property values. Quadratic relationship between the property values and the amount of commercial development in the overall residential area was used to measure the impacts. The study discovered that in a neighbourhood with a small amount of commercial development, a positive relationship exists, while in areas where there are commercial developments in excess of 5% of the total number of properties, a negative relationship exists between the residential property values and the commercial development. Li and Brown (1980) also found a trade-off between the distance from a commercial property and the residential property value. This trade-off was viewed through the lens of the residents of the residential properties in their relation to commercial services. The effect of accessibility was found to be dominant and residential housing prices were discovered to decrease as the distance to the nearest commercial property increases. The results of Stull (1975) and Li and Brown (1980) imply that an increase in the concentration of commercial developments in a particular neighbourhood would increase their closeness to residential properties, which in turn negatively affects residential property values.

However, the type of commercial development could determine the nature of influence it would have on the residential property values. This is exemplified in the study of Batalhone et al (2002), where closeness to specific types of commercial land use was used as a group of control variables, these are the drugstores, bakeries, butcher shops, fruits and vegetable markets, bookstores, restaurants, gas stations and bars. They were all found to have negative effects on the residential property value, except the fruit and vegetable shops,

which showed a positive effect. This implies that the specific type of commercial (retail) use could influence the type of effect it would have on the values of residential property. The result of Batalhone et al (2002) underscores the need for the identification of the types of use of commercial development before relying on the results of such studies and this cautions the reliability of the results of Stull (1975) and Li and Brown (1980).

The study by Addae-Dapaah and Lan (2010) provided more clarity on whether or not shopping centers enhance adjacent residential property prices and found that proximity to shopping centers enhances surrounding property prices. Similarly, the study discovered that residential price premium decreases with an increase in distance from the shopping center. Meanwhile, the result of Addae-Dapaah and Lan (2010) emphasizes the importance of the proximity of the commercial use in the analysis of such a relationship and this was further confirmed in the study of Seago (2013). Seago (2013) tested the effect of a commercial shopping mall (Northgate Mall) at Montgomery County in the USA on the prices of the surrounding property values based on varying proximity. With a hedonic price model for the 250 residential properties considered, it was discovered that residential houses that were within 800 meters of the Mall have their prices depressed in relation to their proximity to the mall. However, from the study, residential properties located beyond 800 meters but not further than 3200 meters have a positive effect on their prices. Tiemann (2020) also examined the impact of grocery stores on residential property prices in England. The study zeroed in on supermarket presence in residential neighbourhoods and used a buffer of 1km to measure the impact on residential property prices. Difference-in-difference regression framework was used for the analysis of the relationship. The result revealed that the opening of supermarkets did not have any significant impact on properties within a 1 km radius, but residential properties that are located beyond the radius experienced an increase in prices. This shows that the distance away from the commercial use of land in the study contributed to an increase in the prices of the residential properties. More specifically on the direction of results, Elenwo (2025) conducted on the influence of commercial activities on residential rental values dynamics in Rumuokroro, Nigeria, discovered that rental values of residential properties increased with distance from commercial properties

On the other hand, Franklin and Waddell (2003) examined the influence of accessibility to different types of employment on single-family residential property values. The study dovetailed into the consideration of the effects of proximity to commercial development and university on the adjacent residential properties and discovered that there was a positive influence of the proximity on the residential property values. Also, Song and Knapp (2004) assessed the impact of closeness to commercial development on rental prices of residential properties and discovered that there is no negative impact of the presence of commercial development in the residential neighbourhood and that an additional premium exists when the neighbourhood store is located within walking distance. It, however, warned that larger commercial development close to the residential property might produce a negative impact.

Further to the findings of Franklin and Waddell (2003) and Song and Knapp (2004), Matthews (2006) examined the impact of commercial property development on proximate residential properties in the gridirons of Seattle, USA. It applied GIS in hedonic modelling in the analysis and discovered positive effects or convenience up to 200ft around the regional mall, used as the commercial development on the residential property value. Stratton (2008) also considered the spatial concentration of office uses and how their combination with other land uses affects values. It was revealed that recent office development has contributed to economic benefits from agglomeration. In addition, residential values were positively affected by the intensity of office development, a central regional location and clustering or agglomeration of office parcels. This corroborates the findings of Franklin and Waddell (2003); Song and Knapp (2004); Matthews (2006) and Stratton (2008).

Sale (2015) found, in studying the impact of a shopping center on the value of adjacent residential properties, using the hedonic model to examine this effect, with Walmer Park shopping center, South Africa as the commercial property, that proximity to the mall increases the residential prices at R112.63 per meter which comparably outweighs the impact of disamenities such as traffic, noise and localised pollution. Meanwhile, a Nigerian study by Sa'ad, et al., (2024) on the effect of closeness to commercial development on residential property rental values in Bauchi metropolis revealed that there are many commercial developments within various residential neighbourhoods and found a significant relationship between the closeness to the commercial development on the rental values of the residential properties. The study however, did not identify the direction and magnitude of the significant relationship. Meanwhile, Kole (2025) examined the impact of relative location to grocery stores on property values in New York. The Food Retail Expansion to Support Health (FRESH) program was considered as the commercial property. The result of the analysis revealed that the commercial property leads to 2.07% increase in value of the residential properties. It was also discovered that opening more grocery stores contributes to increase in residential property values as well as engenders the establishment of complementary businesses.

From existing studies on this subject, there are mixed results on the effect of proximity to commercial development on the values of residential properties. It is also evident that some factors can influence the type of effect such proximity could have. Some of these factors include relative distance, types of business carried out on the commercial property the magnitude of the commercial activities carried out. Unlike most of these previous studies that considered a major commercial development, however, this study seeks to build on the existing literature on this subject by dovetailing the consideration to the perspective of a typical developing city in Nigeria, by looking at residential properties that have retail shop attachments, to examine how such attachments could affect, specifically, rental prices. It also considers the possible differences that the population density of different places across the city can have on this relationship, where a residential neighbourhood from each of the densities is considered for the analysis.

■3.0 METHODOLOGY

3.1 Study Area

This study considers Akure, a medium-sized city and the capital of Ondo State, Nigeria. Akure possesses characteristics that are peculiar to many other developing cities in Nigeria and most cities in developing countries, which contain aggregated residential apartments with

contiguous commercial development. For the purpose of this study, the city is divided into three zones, where a residential neighbourhood is selected from each zone and data was taken from randomly sampled residential properties for questionnaire administration. The core area is classified as high high-density zone, where the buildings are characterized by overcrowding with a high proportion of people living in single rooms and many commercial activities. The neighbourhood selected here is the Arakale area with sparing residential properties, mostly with heavy commercial use. The medium-density zone includes most post-colonial developments in the Akure urban space. It is quite extensive, reaching the present-day suburban developments. The residential neighbourhood selected in this zone is the Oke-Aro area. The low-density area is situated in the peripheral district of the city and the residential neighbourhood selected in this density is Ijapo residential area.

Using cross-sectional survey research, this study chose four streets in each of the residential localities in each density zone selected for this study based on the presence of retail stores in different areas within the residential layouts around the streets. The choice also follows the study of Adeoye (2016), which chose these streets in a study on urban housing quality in Akure and because of the closeness of these streets to make up a compact study area. Physical enumeration of residential buildings was carried out and the result is as shown in Table 1. Also in line with Adeoye (2016), 25% of the total number of residential buildings was purposively selected. In each location within each population density zone, two contiguous properties of similar design and characteristics, one with retail shop attachment, the other without, were purposively sampled.

Table. 1 Residential properties in the study area

Density Areas	Locality selected	Streets selected	No of houses per street	No of residential houses selected (25%)	Total
Low	Ijapo Estate	Ogbese Crescent	49	12	**52**
		Oduduwa Street	56	14	
		Akoko Avenue	47	12	
		Owo Avenue	54	14	
Medium	Oke-Aro	Igbalaye Street	58	15	**61**
		Omudan Street	65	16	
		Afunbiowo Street	54	14	
		Adesida Street	62	16	
High	Arakale	Odundun street	87	22	**79**
		Akinyele martins	93	23	
		Idige street	62	16	
		Ajegunle street	72	18	
Total			**759**	**192**	**192**

Source: Author's survey (2024)

Table 2 Variable operationalization

Variable description	Variable code	Data type	Scale of measurement
Population density	High-density (HD)	Binary	Nominal
	Medium density (MD)	Binary	Nominal
	Low Density (LD)	Binary	Nominal
Perception on proximity to commercial land use	Highly Positive (5)	Numeric	Ordinal
	Positive (4)	Numeric	Ordinal
	Somewhat positive (3)	Numeric	Ordinal
	Negative (2)	Numeric	Ordinal
	Highly negative (1)	Numeric	Ordinal
Rental Prices	Rent	Numeric	Scale (₦)

Source: Author's survey (2024)

3.2 Data Collection

Data was collected from occupiers of purposively selected residential properties that are contiguously located within each population density zone, and in such that each of the residential property designs available in the study area are captured. The different types of residential properties as identified in Olujimi (2010); tenement buildings, 2-bedroom flat/bungalow, 3-bedroom flat/bungalow and 4 or 5-bedroom detached buildings, were purposively administered the questionnaire, where data such as rent paid/collected, and perceptions on retail shop attachments were elicited.

■4.0 RESULTS PRESENTATION

4.1 Questionnaire Administration

Table 3 shows the statistics of the questionnaire administration and retrieval. It shows that a total of one hundred and ninety-two questionnaires were administered to the occupiers (tenants and landlords) of the identified residential properties in each of the zones, with and without the attachment of retail stores. The Table reveals that the response rate from each zone was more than 80% with an overall response rate of 85.4% across the three population density zones. This implies that there is a high response from the respondents and an indication of a good probability of generalizing the result of the analysis to the study area.

Table 3 Questionnaire Administration

Density	Total number of questionnaires administered	Total number retrieved for analysis	Percentages
Low	52	44	84.6%
Medium	61	52	85.2%
High	79	68	86.1%
Total	**192**	**164**	**85.4%**

Source: Author's survey (2024)

4.2 Residential property types in the study area

From Table 4, the results from the high population density area, which is Arakale area reveal that the Tenement building has the highest number in the zone, with 72.7% of the total number of residential buildings. This same type of residential building is common in the medium density area, where 42% of the residential buildings are of tenement design but 2-bedroom and 3-bedroom flat/bungalow are also of relatively appreciable frequency to suggest a close distribution of different types of residential buildings in the medium-density zone. There are no 4 or 5-bedroom detached buildings in this zone, which is similar to the result from the high population density area. For the low population density zone, there are more 3-bedroom flat/bungalow than other types of residential buildings, followed by the 2-bedroom flat/bungalow, to confirm the closeness of the choice of these designs, as also seen in the medium density zone, because the choice of occupiers on these designs is not too different.

However, in this low population density zone, there are six (6) 4 or 5-bedroom detached buildings and the lowest occurrence of tenement buildings to confirm that the low population density zone is more of high-income earners who could afford the luxury provided by such buildings, which is a corollary to what happens in the high population density zone. Overall, the distribution of the questionnaire retrieved for the analysis for different types of residential property designs: tenement, 2-bedroom flat/bungalow, 3-bedroom flat/bungalow and 4 or 5-bedroom detached buildings are 60, 46, 52 and 6, respectively. This shows that more tenement residential buildings are found in the study area than other types of residential building designs and this is an indication that Akure is still undergoing economic development, which can be inferred from the type of residential property designs that are found in the city.

Table 4 Distribution of the different types of residential properties at the different population density zones

		TYPPPTY				Total
		TENEMENT	2 BEDROOM	3 BEDROOM	4/5 BEDROOM DETACHED BLDG	
DENSITY	HIGH (ARAKALE)	32	6	6	0	**44**
	MEDIUM (OKE-ARO)	22	14	16	0	**52**
	LOW (IJAPO)	6	26	30	6	**68**
Total		**60**	**46**	**52**	**6**	**164**

Source: Author's survey (2024)

4.3 Perception on Retail Shop Attachments to Residential Properties

Table 5 shows the result of frequency analysis of the perception of occupants to having retail shop attachments to their residential properties. The analysis was done based on each population density zone, and the results of the analysis revealed that in the high-density area, most of the respondents indicated that closeness to the commercial land use has a highly positive impact on their residential accommodation. It is also shown in this zone that no respondents indicated a highly negative impact. This could be associated with the fact that most of the respondents in the zone have businesses within the area and would prefer to live close to their businesses to ease the cost of commuting, where many of this category of business are of low-income groups, and this confirms the result of the study of Cuberes and

Roberts (2015) that low-income earners, due to the affordability of cost of transportation, prefer to live close to the business district of the city. The mean of their responses is 4.49, which shows skewness towards the highly positive direction of the Likert scale.

In the medium-density zone, the majority of the respondents indicated that retail shop attachments have both positive and somewhat positive effects on the desirability of the choice of their residential accommodation. Only 3 respondents indicated that such attachments have a highly positive effect and a few respondents also indicated in the negative direction. The mean score for these responses is 3.50, which is just above average, implying that respondents consider retail shop attachments to have a somewhat positive rub-off effect on their choice of residential accommodation in the medium-density zone. Most of the residents in this zone also prefer closeness to the commercial center and would prefer accessibility to commercial services, but would choose to stay away from the disamenities of being too close to the Central Business District (CBD) of the city.

In the low population density zone, most responses on the effect of closeness to commercial land use on the choice of residential accommodation were of somewhat positive. The lowest response was from the highly positive, while the highly negative response was also low. This response pattern in the low population density areas might be connected to densely residential land use in the zone where most of the buildings are under strict land use regulations that disallow proliferation of commercial land uses which might be one of the reasons for the choices of the occupiers who moved to this distant zone to avoid the commercial business and disamenities associated with the CBD. However, there are still some respondents who would desire retail shops to be attached to their residential accommodation for some consumer goods and services to enhance the livability of their neighbourhood.

Table 5 Perception of respondents to retail shop attachments to their residential accommodations

Population Density zone	High Density	Medium Density	Low Density
Highly Positive	25(56.8%)	3(5.8%)	5(7.4%)
Positive	17(38.6%)	25(48.1%)	20(29%)
Somewhat positive	1(2.3%)	20(38.5%)	25(36.7%)
Negative	1(2.35%)	3(5.8%)	10(14.7%)
Highly Negative	0	1(1.9%)	8(11.8%)
Mean	4.49	3.50	3.06
Standard Deviation	0.668	0.780	1.0097

Source: Author's survey (2024)

4.4 Comparison of the rental prices of residential properties with and without retail shop attachments

The comparison was done with the use of an independent sample T-test, based on each population density zone.

4.4.1 High-Density Zone

From Tables 6 and 7, it is shown that, though the rental prices of residential properties with retail shop attachments are lower at (M = 91,093.75, SD 92,751.27), t (43) = -0.220, p > 0.050 than rental prices of residential properties without retail shop attachments at (M = 98636.36, SD 92,751.27), the result is not statistically significant. This shows that in the high-density area of Akure, rents of residential properties that are without retail shop attachments are marginally higher than those with retail shop attachments but this result is not statistically significant enough for prediction and might be due to random chance. There are a large number of people living in this zone who desire that their accommodation should be close to their work within the zone (Cuberes & Roberts, 2015). This might make them indifferent to any disamenity that such proximity could have on their residential accommodation and not a major factor in their choice

Table 6 Group statistics of residential property rental prices in the high-density zone

Group Statistics					
	Location	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Rent Paid	With retail shop attachments	22	91093.75	92751.2766	16396.26
	Without Retail shop attachments	22	98636.36	112651.9218	33965.83

Source: Author's survey (2024)

Table 7 Independent sample T-test for the difference in the rental prices in the high-density zone

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Rent Paid	Equal variances assumed	.009	.924	-.220	43	.827	-7542.61	34244.73	-76701.24	61616.01
	Equal variances not assumed			-.200	14.94	.844	-7542.61	37716.25	-87960.16	72874.93

Source: Author's survey (2024)

4.4.2 Medium Density Zone

Tables 8 and 9 show that the rental prices of residential properties without retail shop attachments are also marginally higher at (M = 224,750.00, SD 177,389.51), t (51) = -0.342, p < 0.050 than the rental prices of residential properties that have retail shop attachments at (M = 209,843.75, SD 136,059.07). Unlike the situation in the high-density zone, the higher rents observed on the residential properties in the medium density zone are significantly higher, which implies the reliability of the results.

Table 8 Group statistics of residential property rental prices in the medium-density

Group Statistics					
	Location	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Rent Paid	With retail shop attachments	26	209843.75	136059.07	24052.07
	Without Retail shop attachments	26	224750.00	177389.51	39665.50

Source: Author's survey (2024)

Table 9 Independent sample T-test for the difference of the rental prices in the medium-density zone

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Rent Paid	Equal variances assumed	5.566	.022	-.342	51	.734	-14906.25	43635.89	-102551.50	72739.00
	Equal variances not assumed			-.321	32.82	.750	-14906.25	46388.08	-109303.05	79490.55

Source: Author's survey (2024)

4.4.3 Low-Density Zone

In the low-density zone where there are wealthy and high-income neighbourhoods, results from Tables 10 and 11 show that the rents of residential properties that without retail shop attachments are significantly higher at (M= 771, 621. 62, SD = 76, 7914.79), t(67) = -2.116, p > 0.050 than those with retail shop attachments at (M = 454,843.75, SD = 382241.87). This statistically significant result in the low population density area implies that when residential properties are located away from the commercial land use, their rents are higher than when there is an attachment of a retail shop. This can be explained also from the privacy and residential neighbourhoods that are desired by most occupiers of residential properties in this zone, which pushed them away from the city centers where there is a high volume of commercial activities and this residential choice by high-income earners who reside in this zone is a corroboration of the findings of Jordan, et al., (2004) on the high rent of residential land in farther places from the CBD, which is influenced by their choice to locate far from commercial activities of the CBD.

Table 10 Group statistics of residential property rents in the low-density

Group Statistics					
	Location	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Rent Paid	With retail shop attachments	34	454843.75	382241.87	67571.45
	Without Retail shop attachments	34	771621.62	767914.79	126244.41

Source: Author's survey (2024)

Table 11 Independent sample T-test for the difference of the rental prices in the low-density zone

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Rent Paid	Equal variances assumed	12.228	.001	-2.116	67	.038	-316777.87	149682.19	-615544.77	-18010.98
	Equal variances not assumed			-2.212	54.40	.031	-316777.87	143190.62	-603809.81	-29745.93

Source: Author's survey (2024)

■5.0 DISCUSSION

From the results of the analysis it was revealed that, a part from 4 or 5-bedroom detached buildings that are available only in the low-density zone, all other types of residential property assessed are found in the three zones. Although, tenement buildings are most common in the high-density zone, while 2-bedroom and 3-bedroom flat/bungalow cut across the zones. This signifies the affordability that is influenced by the income group common to each zone. The tenement buildings common in the high-population-density zone are more affordable to low-income earners, while the 4 or 5-bedroom detached buildings, which are the most expensive, are found in the low-density zone that high-income earners can afford. The affordability and income groups of different classes of people determine their choice of residential locations, which is related to their ability to afford the cost of commuting long distances. As such, there is a relationship between the population density of the residential neighbourhood, the income class of the residents and the implication of the proximity of residential properties to retail stores on the rental prices of the residential properties.

The high population density zone, where there is heavy commercial activity and most residential properties are being partly or fully converted to commercial use, has an insignificant effect of the proximity to residential properties on the rental prices, with no significant difference in the prices paid based on the attachment to retail shops (Gimba, et al., 2019). The medium density reveals a marginal increase in the rental prices of residential properties that do not have retail shop attachments, which is statistically significant and might be due to the fact that some of the residents of this zone are of the middle-income class and would also not want to pay too high a cost of accessing consumer goods and services that these retailers offer. It is not unusual to however have residents of this zone prefer staying away from the retail stores as they desire the quietness of the high-income earners, while also not willing to move too far from the goods and services that are available in the retail stores. In the low population density where there are high-income earners who can afford the cost of commuting long distances for commercial services, there is a statistically significant difference in the rental prices of residential properties where those without retail shop attachments have higher rental prices than those with such attachments. This result justifies the classical urban models where the cost of commuting and affordability influence land uses, thus affecting the rent received or paid on the land.

■6.0 CONCLUSION

Akure is a developing city in Nigeria with changes in morphology, spatial distribution and configuration. While it is recognized that there is a master plan for the development of the city, different land uses are found in it, where commercial and residential land uses are the most common. As the city grows, there are occasions of land use succession, which gives room for the highest and best use of the land for optimum exploration of its potential (Adebayo & Ogunleye, 2014; Gimba, et al., 2019). This has led to the contiguous and complementary situation of both commercial and residential land uses in the city. Particularly in Akure, there are pockets of commercial uses, especially retail stores within residential neighbourhoods, and the essence of these occasions could be of mixed desirability from residents, as some research works have found this to be of positive implication, while others have found it to be of negative implication. Unlike much previous research works that considered the effects of major commercial land use like shopping malls on rental values of proximate residential properties, this study has considered the peculiarity of a growing city in a developing country like Nigeria where it is not

unusual to have retail stores attachments with residential properties within the residential neighbourhoods and this study concentrates on the effects of these retail stores. To distinctly address these concerns, the division of the city into population density zones allowed controlling for the zonal differences, which might have negatively affected the reliability of the results. The results of this study shows that while the attachment of retail stores to residential buildings as it enhances proximity to commercial activities without necessarily commuting to commercial nerves of the city, the attachment reduces prices of the residential properties, especially in the medium and low density zones of the city

It is therefore recommended that the town planning offices in the study area should make more definite provision for commercial space within various residential neighbourhoods across the zones, despite the pressure that could come from land use succession and this can be effectively incorporated into the planning schemes. To facilitate this, there should be intensified efforts on the enforcement of the various development control stipulations, in line with the various land use needs of the residents, especially in the high-density zone, through strict compliance to the designated land use zoning and the approved planning schemes in plan approval. This is expected to abate the spate of unguided commercial developments in this zone to permit the development of higher rental price residential properties.

Acknowledgement

Authors appreciate and acknowledge the contribution of every work cited and referenced in this paper. They form the base of building this study. The supportive academic and research environment of the Department of Estate Management, FUTA is also acknowledged.

Conflicts of Interest

The authors hereby declare that there is no conflict of interest whatsoever regarding the writing and publication of this paper.

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