

Effects Of Locational Infrastructural Facilities On Commercial Property Value In Sokoto, Nigeria

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ABSTRACT: This study investigates the effect of infrastructural facilities on commercial property value in Sokoto, Nigeria. Primary and secondary data were used, and stratified random sampling technique was employed with structured questionnaires to extract necessary information from 279 sample size using Kothari's formular from study population of 1076 sample frame. Both descriptive statistic of mean, percentages and weighted mean; and inferential statistical tool of Pearson's product moment correlation were adopted for data analysis. The study revealed that there is significant difference between facilities from one location to another; and that there was statistically significant effect of locational facilities on rental values of commercial properties in the study area. The study concluded that locational facilities play a significant role in determining value of commercial properties. The study recommended among other things that state government should provide infrastructural facilities where they are lacking within the metropolis. This will bring evenly distributed development and commercial activities and consequently attract more investors to the city.

Key Words: Commercial property, Infrastructural facilities, Real property, Rental value.

1. INTRODUCTION

The impact of location in property market is very significant. The fact remains that property units are fixed in location, they however differ in terms of their surroundings, neighborhood and the kind of community in which they are located. Considerable importance is attached in today's world to property's location as it influences the use and value of the property. It has been established that landed properties located in positions of greatest accessibility, are more sought after. The time, costs and ease of such relationship are therefore crucial factors in the analysis, assessment and eventual choice of location [1]. Location has always been an important determinant of a property's value. Since the demand for different types of properties is highly dependent on location, the value of landed properties is influenced by several locational factors [2]. Many factors interplay to create property values. For commercial property, factors like accessibility, population, volume of trade patronage, adequate communication facilities, efficient transportation system and many other factors to be considered. Location may also be with the surrounding activities, and when these relationships are negative to the economic and social well-being of the property, such a property is said to have "Location obsolescence" and hence commands low rental value [3]. Factors that negatively affect the value of real property, affects ownership's goal or target income. They also cripple the investor's interest by discouraging subsequent investment. Since location is considered a factor that may likely affect the rental value of commercial properties, and because commercial activities are very significant in strengthening the economic basis in our urban areas, therefore, playing important role in the socio-economic development, the most preferable location for commercial activities is the center of the city. This might also be the reason why most of the purposely built residential properties are being converted to commercial uses in our cities centers today [4]. Though, commercial activities are

very significant in strengthening the economic basis in our urban areas. The location of economic properties has been a difficult concept to understand. The primary objective of commercial properties is the derivation of financial gains, and, the demand for land is a reflection of the profitability or utility derivable from its use. The greater the benefit to be obtained from a particular use, the higher the rent that the user will be willing to pay for it [5]. In Sokoto metropolis, there appear to be a wide range difference in the levels of rent passing on commercial properties in a particular location and between different locations. Tenants are always faced with the fact that although, similar commercial properties commands different rental value within the same area, and also, when the properties are not situated in the same area or location, the rental value of same type of these commercial properties varies greatly. While the reason adduced to this disparity in rental value is always "the location", this study seeks to carry out a comparative analysis of locational effects on commercial property value in Sokoto metropolis, by providing answers to these research questions; is there disparity in the facilities available in different locations in the study area? Is there any disparity in the rental value of commercial properties in the study area? Is the disparity in the locational facilities having effect on property value? Based on these, the following null hypotheses were postulated for the study:

H₀₁: There is no statistically significant difference between the facilities in different locations. **H₀₂:** There is no statistically significant difference between the values of commercial properties in different locations. **H₀₃:** There is no significant effect of location on values of commercial property in the study area

1. METHODOLOGY

The study covered seven (7) different locations in Sokoto metropolis as shown in table 1.

Table 1. Locations and description

Location	Description
A	Abdullahi Fodio road/Central Market
B	Emir Yahaya/Ahmadu Bello way
C	Lamido Adamawa road
D	Birnin Kebbi road
E	Sultan Bello road
F	Gusau road
G	Bye-pass road

Rental value was adopted as value and its coverage was for ten (10) years (2006-2015). Also, the commercial properties covered were offices and retail shops, since these types of commercial properties cut across the study area. Both the Descriptive and Inferential Statistical tools were adopted for the analysis of data. Stratified random sampling technique was used in conjunction with structured questionnaires to extract necessary information from the target population who were either the owners or occupiers of commercial properties in Sokoto metropolis. The sample frame for the Commercial properties was 2076 as obtained from Sokoto State Board of Internal Revenue and buttressed by pre-survey physical enumeration. The estimated sample size, using [6] formula, was 279. Stratified random sampling technique was employed because of the vastness of the city and the variation in the numbers of commercial properties from one location to the other. 247 questionnaires were adequately filled and returned this represents 88.53% (table 2) which is presumed to be adequate for this study.

Table 2: Allocation of sample size and Questionnaires distribution

Loc	Comm.Ppt.		T	%	SS	QR	%
	Sho p	Offi ce					
A	314	28	342	16.47	46	39	84.78
B	368	46	414	19.94	56	47	83.92
C	197	10	207	9.97	28	26	92.85
D	257	12	269	12.96	36	34	94.44
E	294	16	310	14.93	42	38	90.47
F	172	85	257	12.38	34	29	85.29
G	186	91	277	13.34	37	34	91.89
Total	1788	288	2076	100	279	247	88.53

Source : Author's field Survey (2016)

Table 2 showed that 46 questionnaires were administered in AbdullahiFodio/Central Market road out of which 39 were dully filled and returned, this represent 87.78% of the administered questionnaire on Abdullahi Fodio/Central Market road. Also, Lamido Adamawa road received 28 questionnaires and 26 were returned amounting to 92.85%. 42 questionnaires were distributed at Sultan Bello road and 38 were retrieved, representing 90.47 %. Bye-pass road had 37 questionnaires and 34 were retrieved which is 91.89% of the questionnaires for that location. On the overall 88.53% of the administered questionnaires were retrieved and are used for analysis.

2. ANALYSIS AND DISCUSSION

The fact that same facilities are available in all the locations in the study area prompted the study to investigate the functionality, regularity and effectiveness of the facilities in these locations. The response from the questionnaires were analyzed using a five (5) point likert scale to establish weighted mean (WM) score for various locations. The

facilities considered are; road (R), water (W), electricity supply (E), waste disposal (WD), drainage (D), security (S), telecommunication service (T) and vehicle parking space (P). (Table 3)

Table 3. Variation in regularity, effectiveness and functionality of the facilities in different locations

Location	Road					WM
	VG (5)	G (4)	F (3)	B (2)	VB (1)	
A	37 (185)	1 (4)	1 (3)	-	-	4.92
B	40 (200)	7 (28)	-	-	-	4.85
C	26 (130)	-	-	-	-	5.00
D	30 (150)	4 (16)	-	-	-	4.88
E	32 (160)	8 (32)	-	-	-	4.80
F	24 (120)	5 (20)	-	-	-	4.83
G	4 (20)	30 (120)	-	-	-	4.10
Location	Electricity supply					WM
	VS (5)	S (4)	FS (3)	NS (2)	NA (2)	
A	-	3 (12)	36 (108)	-	-	3.08
B	-	24 (96)	23 (69)	-	-	3.51
C	-	8 (32)	18 (54)	-	-	3.31
D	-	12 (48)	22 (66)	-	-	3.35
E	-	26 (104)	12 (36)	-	-	3.68
F	-	10 (40)	19 (57)	-	-	3.34
G	-	-	34 (102)	-	-	3.00
Location	Waste disposal					WM
	Vg (5)	G (4)	F (3)	B (2)	Vb (1)	
A	-	-	21 (63)	10 (20)	8 (8)	2.33
B	-	10 (40)	20 (60)	7 (14)	10 (10)	2.64
C	-	-	18 (54)	5 (10)	3 (3)	2.58
D	-	11 (44)	14 (42)	9 (18)	-	3.05
E	-	26 (104)	5 (15)	7 (14)	-	3.50
F	-	19 (76)	8 (24)	1 (2)	-	3.51
G	-	23 (92)	11 (33)	-	-	3.68
Location	Drainage					WM
	Vg (5)	G (4)	F (3)	B (2)	Vb (1)	
A	1 (5)	5 (20)	20 (60)	9 (18)	4 (4)	2.74
B	47 (235)	-	-	-	-	5.00
C	-	8 (32)	18 (54)	-	-	3.31
D	-	12 (48)	14 (42)	8 (16)	-	3.12
E	32 (160)	2 (8)	4 (12)	-	-	4.74
F	-	18 (72)	7 (21)	4 (8)	-	3.48
G	1 (5)	2 (8)	4 (12)	16 (32)	11 (11)	2.00
Location	Water					WM
	Vg (5)	G (4)	F (3)	B (2)	Vb (1)	

	VR (5)	R (4)	FR (3)	NR (2)	NA (1)	WM
A	-	9 (36)	20 (60)	10 (20)	-	2.97
B	-	24 (96)	22 (66)	1 (2)	-	3.49
C	-	2 (8)	8 (24)	16 (32)	-	2.46
D	-	-	11 (33)	1 (2)	22 (22)	1.68
E	-	12 (48)	13 (39)	15 (30)	-	2.93
F	-	-	15 (45)	12 (24)	2 (2)	2.45
G	-	3 (12)	31 (93)	-	-	3.09
Security						
	VG (5)	G (4)	F (3)	B (2)	VB (1)	WM
A	9 (45)	10 (40)	10 (30)	-	-	2.95
B	-	23 (92)	24 (72)	-	-	3.49
C	-	-	26 (78)	-	-	3.00
D	12 (60)	22 (88)	-	-	-	4.12
E	25 (125)	13 (52)	-	-	-	4.66
F	-	-	26 (78)	3 (6)	-	2.90
G	-	17 (68)	17 (51)	-	-	3.50
Telecom. Services						
	Vg (5)	G (4)	F (3)	B (2)	VB (1)	WM
A	39 (195)	-	-	-	-	5.00
B	36 (180)	11 (44)	-	-	-	4.77
C	26 (130)	-	-	-	-	5.00
D	22 (110)	12 (48)	-	-	-	4.65
E	8 (40)	30 (120)	-	-	-	4.21
F	21 (105)	8 (32)	-	-	-	4.72
G	34 (170)	-	-	-	-	5.00
Parking space						
	Vg (5)	G (4)	F (3)	B (2)	VB (1)	WM
A	-	-	15 (45)	10 (20)	14 (14)	2.03
B	-	18 (72)	7 (21)	22 (44)	-	2.91
C	-	17 (68)	-	9 (18)	-	3.31
D	13 (65)	-	21 (63)	-	-	3.76
E	-	1 (4)	30 (90)	2 (4)	5 (5)	2.86
F	11 (55)	9 (46)	9 (27)	-	-	4.92
G	9 (45)	21 (84)	1 (3)	1 (2)	2 (2)	4.00

Source: Authors' field survey (2016)

The weighted mean for each facility in various locations were collated and the summary are presented in table 4 below.

Table 4. Average Weighted Mean of Locational facilities

	R	W	D	E	S	P	WD	T	AW M
A	4.92	2.97	2.74	3.08	2.95	2.03	2.33	5.00	3.25
B	4.85	3.49	5.00	3.51	3.49	2.91	2.64	4.77	3.83
C	5.00	2.46	3.31	3.31	3.00	3.31	2.58	5.00	3.50
D	4.88	1.68	3.12	3.35	4.12	3.76	3.05	4.65	3.58
E	4.80	2.93	4.74	3.68	4.66	2.86	3.50	4.21	3.92
F	4.83	2.45	3.48	3.34	2.90	4.92	3.51	4.72	3.77
G	4.10	3.09	2.00	3.00	3.50	4.00	3.68	5.00	3.55

Source : Author's Field Survey (2016)

Road (R): among the roads in the study area, Lamido Adamawa road is the best with weighted mean score of 5.00, followed by AbdullahiFodio road with weighted mean score of 4.92 while, Birnin-Kebbi road with weighted mean score of 4.88 comes third and, Bye-pass road take the rear with 4.10 weighted mean score.

Water (W): On water availability, it can be seen that Emir Yahaya road enjoys water availability more than any other location in the study area with a weighted mean of 3.49, which is closely followed by the Bye-pass road and AbdullahiFodio Road/ Central Market road with 3.09 and 2.97 weighted mean score respectively. While Gusau and Birnin-Kebbi roads takes the rear with 2.45 and 1.28 weighted mean scores respectively.

Drainage (D): Emir Yahaya/Ahmadu Bello way and Sultan Bello road enjoys better drainage system as revealed in table 2, the two locations has weighted mean scores of 5.00 and 4.74 respectively, while, Bye-pass and AbdullahiFodio/Central Market roads has weighted mean scores of 2.00 and 2.74 respectively.

Electricity(E): Regularity of electricity (power supply) was revealed to be at its best along Sultan Bello and Emir Yahaya/ Ahmadu Bello way with 3.68 and 3.51 weighted mean score respectively. AbdullahiFodio/ Central Market roads and Bye-pass recorded the least regularity of electricity supply with weighted mean scores of 3.08 and 3.00 respectively.

Security (S):Sultan Bello and Birnin-Kebbi roads is the most secured location as shown in the analysis, with weighted mean score of 4.66 and 4.12 respectively. AbdullahiFodio/Central Market and Gusau roads are the most unsecured locations with 2.95 and 2.90 weighted mean scores respectively as revealed in table 2.

Parking space (P):Gusau and Bye-pass roads recorded weighted mean score 4.92 and 4.00 respectively. AbdullahiFodio/Central Market road has weighted mean of 2.03 and Sultan Bello road recorded weighted mean score of 2.86.

Waste disposal: Bye-pass and Gusau roads has most effective waste disposal with weighted mean scores of 3.68 and 3.51 respectively, while, AbdullahiFodio/Central Market road, Lamido Adamawa road and Emir Yahaya/AhmaduBello way, brought up the rear with weighted means scores of 2.33, 2.58 and 2.64 respectively.

Telecommunication Services (T) : AbdullahiFodio/Central Market, Lamido Adamawa and Bye-pass roads has weighted

mean score of 5.00 respectively. Sultan Bello and Birnin-Kebbi roads as revealed in table 2 has weighted mean score of 4.21 and 4.65 respectively. On the average, table 2 revealed that, Sultan Bello road has the highest average weighted mean score of 3.92 therefore the best locational facilities, followed by Emir Yahaya/Amadu Bello way with average weighted mean score of 3.83 while, Gusau road has an average weighted mean score of 3.77. Birnin-Kebbi road followed suit with average mean score of 3.58, followed by Bye-pass and Lamido Adamawa roads with average weighted mean of 3.55 and 3.50 respectively while, AbdullahiFodio/Central Market road has the least average weighted mean score of 3.25. These were further subjected to statistical test to ascertain whether there is variation between the locational facilities, using chi-square statistical test, as presented in table 3.

Table 5: Chi-square test for Variation between Locational Facilities

Loc	O	E	(O-E) ²	(O-E) ² /E
A	3.25	3.63	0.14	0.04
B	3.83	3.63	0.04	0.01
C	3.50	3.63	0.02	0.01
D	3.58	3.63	0.00	0.00
E	3.92	3.63	0.08	0.02
F	3.77	3.63	0.02	0.01
G	3.55	3.63	0.01	0.00
TOTAL	X ²		0.09	

df = 6, α = 0.05 and Table / Critical value = 12.59

Analysis of surveyed data (2016).

Calculated X²(0.09) < critical value (12.59), showing that “there is significant difference between the average mean facilities from one location to another”.

Variations in the mean rental values of commercial properties in different location

Mean rental values of commercial properties (offices and shops) in the locations under study were also collated and presented in table 6.

Table 6 Mean rental values of commercial properties in different location

LOC	Office (Mean ₦/m ²)	Shop (Mean ₦/m ²)	Average Mean Rental Value (₦/m ²)
A	12,500	15,000	13,750
B	12,000	14,000	13,000
C	10,000	9,000	9,500
D	9,000	10,000	9,500
E	12,000	13,000	12,500
F	9,200	10,000	9,600
G	9,000	10,000	9,500

Source : Author’s Field Survey (2016)

Table 6 revealed the average of the two mean rental values (office and shop) for each location. A noticeable inter-zonal variation in rental values can be observed. Along AbdullahiFodio/Central Market road the mean rental for office and shop are ₦12,500/m² and ₦15,000/m² respectively, while the average of the two is ₦13,750/m². This is followed by Emir Yahaya/Ahmadu Bello way with an average mean rental value at ₦13000/m². Birni-Kebbi and Bye-pass road has ₦9500/m² as their average mean rental value

respectively. The table also revealed that AbdullahiFodio/Central Market road has the average mean rental value of ₦13750/m², Sultan Bello road ₦12500/m² and Gusau road ₦10000/m² while, Lamido Adamawa road, Birnin-Kebbi road and Bye-pass road has ₦9500/m² as their average mean rental value respectively. This implies that the cheapest parts of the city to operate a commercial activity are Lamido Adamawa road, Birnin-Kebbi road and Bye-Pass road. The average mean rental value here is about ₦9,500/m² compared with about ₦13,750/m² along AbdullahiFodio/Central market road. An attempt was made to show whether there is statistical difference between the mean office rental values and mean shops rental value using Paired sample T test (table 7)

Table 7. Paired sample T test

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 Office	10528.5714	7	1577.67158	596.30381
Pair 1 Shop	11571.4286	7	2370.45304	895.94703

Analysis of surveyed data (2016)

The results the tables 7 showed that there was a significant difference in the mean office rental value (M=10528.5714, SD=1577.67158) and mean shop rental value (M=11571.4286, SD=2370.45304); t (-6)=-2.505, p=0.046. This shows that the mean shop rental value of 11571.4286 is greater than the mean office rental value, which is 10528.5714. These results suggest that shops commands more rental value compare to offices.

Effect of locational facilities on rental value

Effort was made to account for the observed variations in the rental values. The average weighted mean (AWM) scores of the locational facilities and the average mean (AM) rental values were extracted and tabulated in table 7.

Table 8 Locational facilities (AWM) score and mean rental values of shops and offices

Location	Facilities Scores (AWM)	Rental value (AM) (₦/m ²)
A	3.25	13750
B	3.83	13000
C	3.50	9500
D	3.58	9500
E	3.92	12500
F	3.77	10000
G	3.55	9500

Source : Author’s Field Survey (2016)

To show whether there is any relationship between the average weighted mean of locational facilities (LOCFAC) and average mean rental value (RENTAVAL) of commercial properties, the data were subjected to Pearson’s correlation analysis which revealed that, there was a very weak, positive correlation between locational facilities(LOCFAC) and average mean rental value of commercial properties (RENTAVAL), which was statistically significant (r = 0.973, P=0.016 < α = 0.05) (table 9).

Table 9. Pearson's correlation analysis

LOCFAC	Pearson Correlation	1
	Sig. (2-tailed)	
RENTAVAL	Pearson Correlation	.016
	Sig. (2-tailed)	.973

Analysis of surveyed data (2016)

Since the level of significance of RENTAVAL ($p=0.016$) attained is lesser than α (0.05) (with 95% confidence interval), it is safe to conclude that "there is statistically significant effect of locational facilities (LOCFAC) on average mean rental values of commercial properties (RENTAVAL)".

CONCLUSION

From the findings, there is variation in availability/functionality of locational facilities and in locational rental value, though, that of rental value is not statistically significant. This means that, the more the availability of facilities in a location, the higher the rental value of that location. The statistical test conducted corroborated that there is statistically significant effect of locational facilities on commercial property value. Therefore, locational facilities play a significant role in determining value of commercial properties.

RECOMMENDATION

Provision of infrastructural facilities is a primary function of all governments throughout the universe. Where urban infrastructure is adequately provided and efficiently managed, productive and profitable land uses are usually attracted towards such area. Therefore, both the state and the local government authorities have a major role to play, since the cost of providing it is beyond individual. Provision of these infrastructural facilities where they are lacking will bring evenly distributed development and commercial activities, and attracts more investors to the city.

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