# Spatial Variation Of Commercial Land Use Rental Value In Southern Calabar, Cross River State, Nigeria – A Quantitative Judgment For Planning Intervention

#### Offiong, Victor Eyo

LL.B, M.Sc, Ph.D, Building/Planning Law, Legal Unit, Department of Urban and Regional Planning, CRUTECH, Nigeria

## Umoh, Raphael John

Department of Urban and Regional Planning, CRUTECH, Nigeria

#### **Uzoezie, Arinze Destiny**

Department of Geography and Environmental Science Planning, University of Calabar, Nigeria

Abstract: A typical problem in the distribution pattern of commercial land use in Southern Calabar is the incidence of vehicular congestion in some locations of the town. This of course flows from the movement of people from the peripherals to the Central Business Areas with the attended consequences for increase in population and hike in rental values and cost of living generally. This study was anchored on the analysis of the pattern of commercial Land use in Southern Calabar. It aimed at assessing differences in rental value of commercial Land use in Southern Calabar. To guide this study, a hypothesis was formulated to examine the variation in commercial Land use rental value in the study area and literatures were reviewed in accordance with the variable under investigation. Data sources included primary and secondary sources. A survey research design was adopted and information captured in the questionnaires and checklists were obtained in line with the set objective. SPSS version 11.0 was used to run the ANOVA analysis, at a level of significance of 0.05. The results of the ANOVA showed that at degree of freedom 79 and at 0.05 level of significance, a calculated F value of 14.89 was generated, greater than the critical value of 0.000, hence, giving the researchers the power of accepting the alternative hypothesis that there exists a significant variation in the location pattern of the commercial land use rental value in Southern Calabar. The researchers recommended therefore that neighbourhood shopping facilities should be provided in locations with inadequate commercial facilities in the study area and the need for planning intervention in the commercial land use location should be encouraged. Government and other stakeholders should effectively monitor commercial land use activities in the areas, and if the aesthetics of Southern Calabar must be sustained, a comprehensive and revised master plan for the area should be prepared and implemented to guide future development in the area.

Keywords: Commercial Land Use, Transportation, Rental Value, Socio-Economic, Town Planning, Quantitative Judgment, Planning Intervention

## I. INTRODUCTION

Commercial Land use is one of the most important land uses necessary in any human settlement setting. Its significance in our residential neighbourhood is tied to its

ability to generate revenue for economic growth and social development. But the question is, are these commercial land use evenly distributed and how does this distribution affect rental value of the lands, in order to achieve the needed economic growth.

Despite the enormous sensitization of the relevance of land use planning and maintenance of orderliness in the city physical artefacts in Nigeria, there have still been gross cases of physical disorder and unsustainability in urban areas, which is a direct manifestation of the failure of land use planning. Obot, (2004). It is important for urban planner in various States of Nigeria particularly Cross River State and Calabar South under consideration, to acknowledge and include certain aspects of urban development into the land use allocation process and device specific tools of administering or managing them is of significant importance. Furthermore, issues affecting location of commercial land use pattern have been growing enormously and receiving keen attentions, as locational, pattern of commercial land use affect the rental value of land in the study area and also contribute to traffic congestion in areas where these lands are located due to the unavailability of parking space for customers. Examples of these shopping centres include: Watt market, Mbukpa market, Goldie market, Bed well, Victor Akan Street, Edibe -Edibe, Lagos street etc. all in a mixed Commercial and Residential land not originally so planned.

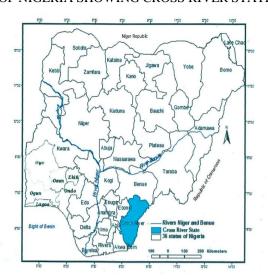
It was against this backdrop that, this study was set out to analyse the spatial variation of rental value of land use patterns in the study area and to proffer solutions which are policy oriented to checkmate the prevailing problems

## II. MATERIAL AND METHOD

## A. STUDY AREA

The study area is Calabar South Local Government Area in Cross River State of Nigeria, located in the Southern Senatorial district, with its Headquarters in Anantigha. The study area has a population of 299,657 (NPC, 2015). Calabar south lies between latitude 4° 46' and 4° 58' North of the equator and longitudes 8<sup>0</sup> 15' and 8<sup>0</sup> 26' East of the Greenwich meridian, with an approximate land mass of 264 km<sup>2</sup>. It is bounded by Calabar Municipality in the north; its southern shores are bounded by the Atlantic Ocean, Akpabuyo in the east and in the west by Odukpani Local Government Area and Akwa Ibom State as evident in the Map depicted in figure xx. The study area, according to the Koppen classification has a semi-equatorial (monsoonal) climate with normal heavy down pours, with two seasonal periods, which are: the rainy and dry season. It has an annual rainfall ranging from 2500mm to 300mm. The variation in the intensity and reliability of rainfall coupled with high temperature throughout the year affect the influx of visitors to the area. The temperature varies between  $26^{\circ}$ c to  $33^{\circ}$ c.

## MAP OF NIGERIA SHOWING CROSS RIVER STATE



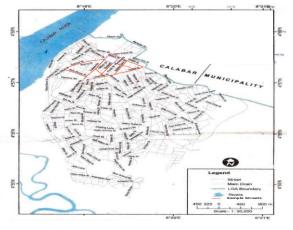
Source: Office of Surveyor- General Ministry of Lands & Housing

Figure 1: Map Of Nigeria Showing Cross River State



Source: Office of Surveyor- General Ministry of Lands & Housing Calabar.

Figure 2: Map of Cross River State showing Calabar South LGA



Source: Office of Surveyor- General Ministry of Lands & Housing Calabar

Figure: 3 Map Of Calabar South Local Government Area

#### B. RESEARCH DESIGN

In conducting this study, the researchers adopted survey research design to enhance the effective realization of the set goal. The researchers had employed the survey research because it involved the collection of data to accurately and objectively analyse the existing commercial land use as well as their location pattern in the study area. Besides, the survey research design was selected because the study involved both large and small population, the distribution and interrelation between variables under investigation (commercial land use location pattern and rental value of commercial land use). The survey research depended basically on the questionnaires, site observation, checklist and oral interview as instrument for data collection.

## C. SAMPLE TECHNIQUE

To verify the hypotheses for this research, the study area was divided into eight (8) sectors; that is sector I to VIII for convenience of researchers operations. After which, they employed random sampling techniques in questionnaire administration in residential areas where this retail outlet are situated while the stratified sampling technique was adopted with checklist to interview the management of the existing commercial outlets and authorities in the ministry of internal revenue in the study area. However, based on the quality principle, four hundred (400) copies of questionnaire were administered to operators and customers each of the eight (8) sectors of the study area as demarcated by the researcher to conduct a proper study.

# D. TYPES AND SOURCES OF DATA

The researchers employed both primary and secondary data in this study. The primary data include: Oral Interview, Site Observation and Questionnaire while the secondary data employed in the study were acquired from textbooks materials, internet like journals, magazines, newspapers, the population of the study area was obtained from the national population commission (NPC) and the hard copy maps were obtained from the Office of the Surveyor-General ministry of Lands and Housing Calabar Cross River State.

# E. PROCEDURES FOR DATA COLLECTION

The researchers used questionnaire survey method in the data collection. Meanwhile; the questionnaire was in four (4) sections. "A, B, C and D" information on the bio data, such as their, sex, marital status among others were captured in section "A" of the questionnaire. Also, information on the socio-economic status of the people such as level of income per month, education qualification, occupation etc. was captured in section "B" of the questionnaire. Furthermore, information such as location of land use commercial pattern and others were captured in section "C" and "D" of the questionnaire. Also, information with regards to the location of activity, commercial land use sectors such as financial institution, supermarket, Restaurant/Eateries, Open/general market, lock-up shops, office, special market, factors that

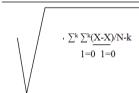
determine choice of commercial land use location pattern with commercial land use sectors among others—were equally captured on the checklist as source from the management of commercial land use and ministry of internal revenue Calabar Cross River State. Oral interview was conducted in the cause of data collection. This enabled the researchers to have a face to face interaction with the management working in the various existing commercial land use outlets. A total of 400 questionnaires were administered to 400 respondents in the study area.

## F. STATISTICAL TECHNIQUES

In order to have reliable findings, results and conclusion, statistical measures such as tables, charts and percentages were analysed, summarised and interpreted with the primary data collected from the field. Graphs were equally employed to demonstrate the various rent paid per year, sale in the commercial land use sector etc. of Southern Calabar.

To this effect, the Analysis of Variance (ANOVA) using the statistical package for social sciences (SPSS) version 11.0 was used to test the null hypotheses (Ho) which said "There is no significant difference in the location pattern of commercial land use with rental value of commercial land use sector in Calabar south". The equation below is an ANOVA formula for computing the F ratio.

$$F = \underbrace{\begin{array}{c} \text{between group variance} \\ \text{Within group variance} \end{array}}_{k=\sum 1=0(X-XGM)^{2/K-1}} \underline{\hspace{2cm}}$$



Where; the upper equation is called between group variance

The lower equation is called within group variance

GM= Group mean

K=Number of group (column)

N=product of group in row and column

## III. DISCUSSION OF RESULTS

S/ N	NAMES	LOCATIO N	SECT OR	SEAS ON	TYPE
1.	Uwanse market	Uwanse Road	I	Daily	Petty market
2.	St.Mary's market	Howell street	I	Daily	Petty market
3.	Udua-Itak Eto	Palm street extension	II	Weekly	Big market
4.	Timber market	Ibesikpo	II	Daily	Big market
5.	Udua-mbakara	Poultry farm road	II	Weekly	Petty market
6.	NIL	Afokang Street	III	NIL	No market
7.	Mbukpa market	Mbukpa road	IV	Daily	Big market
8.	Okop-Adi	Umoh-Orok	IV	Weekly	Petty

	market				market
9.	Watt market	Bedwell	V	Daily	Big market
10	Goldie market	Goldie road	V	Daily	Big market
11	NIL	Ekpo Edem Street	VI	NIL	No market
12	Beach market	Hawkin's Road	VII	Daily	Big market
13	Crutech market	Ekpo- Abasi	VII	Daily	Petty market
14	Slaughter market	Anantigha	VIII	weekly	Petty market
15	Ebuka-Ebuka main market	Effio-awan	VIII	Daily	Petty market

Source; Field Survey August, 2015

Table 1: Market Location According To Sector In Southern Calabar

Table 1 above shows the market location according to the eight sectors of the study area as design by the researchers. Calabar South have a total of 13 existing markets as at the time this study was conducted. Meanwhile, it was also indicated in Table 1 that Sector (I) has 2 markets and the markets are petty trade markets with a daily operation of sales while Sector (II) has 3 markets of which two (2) of them are big market ranging from a timber market, general market and 1 petty market. Sector (III) has no market; sector (IV) equally has 2 markets, 1 daily market but a petty market and 1 weekly and big market. Sector (v) has 2 daily markets, the two are big markets. Sector (VI) has no market. Sector (VII) has 2 daily markets, 1 petty market and the other big market. Sector (VIII) has a total of 2 markets, 1 daily but petty market and the other weekly but petty market. In the distribution we can see that sector III and VI lacks market.

Sector	Markets	No OF SUPER MARKETS	Total	%
I	2	5	7	6.9
II	3	22	25	24.7
III	0	15	15	14.9
VI	2	9	11	10.9
V	2	7	9	8.9
VI	0	7	7	6.9
VII	2	9	11	10.9
VIII	2	14	16	15.8
Total	13	88	101	100

Source: Field Survey August, 2015

Table 2: Markets And Supermarkets In The Study Area

The supermarkets in the study area as presented in Table 2 showed that 6.9% of the market and supermarkets in the study area are situated in sector (I), 24.7% of the market and supermarkets are located in sector (II) of the study area. Meanwhile, 14.9% of the total markets and supermarkets are found in sector (III) of the study area. However, sector IV, V, VI, VII, received the percentage value of 10.9%, 8.9%, 6.9%, 10.9% respectively. Table xx also explain that 15.8% of the markets and supermarkets are operating in sector VIII of the study area.

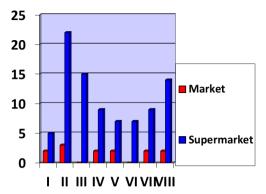


Figure 4: Markets and Supermarkets in the study area

Sect	Locatio			Comme	rcial La	nd use Sec	ctor			Tot	%
or	ns of Activiti es	Finan cial institu tions	Sup er ma rke t	Eat erie s	Op en Ma rke t	Lock Up shop s	Of fic e	Spe cial Ma rke t	Oth ers	al	
I	Uwanse	00	05	21	02	34	12	00	21	95	6.8
п	Street Edibe- Edibe	03 03 02	22	16 35	03 02 02	78 112 103	09 06 10	01 00 01	14 26 23	146 199 165	10. 5
Ш	Ekpo Abasi	00 00	15 09	15 17	02	36	20	00	16	98	14. 3 11.
IV	Mbukpa Road	00 02	07	26 36	00 02 02	109 178 167	12 12 03	00 01 00	29 31 27	183 269 238	8 7.0
V VI	Howell Street		07	23							13.
VII	New Air port		09								19. 3 17.
VIII	Goldie St Bedwell Rd		14								0
TO TAL		10	88	189	15	817	84	3	187	139 3	100

Source: Field Survey August, 2015

Table 3: Distribution Of Commercial Land Use Sector And Their Sectorial Location

Table 3 present the distribution of commercial land use sector and their sectorial location of which 6.8% of the commercial activities are located in sector I, 10.5% of sample population commercial activities are situated in sector II. More so, commercial activities located in sector III, IV,V received the percentage values of 14.3%, 11.8%,7% respectively. The evidence in table 3 shows that over 13.1 % of commercial activities are established in sector VI. Meanwhile, the percentage values 19.3% and 17% of commercial activities are found in sector VII and VIII of the study area. The result implies that within the range of sector III, VI, VII and VIII there is high concentration of commercial activities and the places frequently experience traffic congestion.

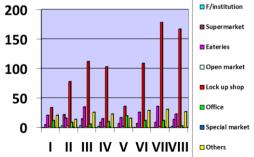


Figure 5: Sectorial Location and Number of Commercial Land Use in the Study Area

_											
	Size (M)	I	II	III	IV	V	VI	VII	VIII	Total	%
I	3.6by3.6	11	1	4	11	5	2	3	2	39	28.9
Ī	3.6by7.2	6	3	11	5	4	6	3	1	39	28.9
ſ	7.2by7.2	4	2	1	3	3	3	1	2	19	14.0
ſ	7.2by10.8	2	11	1	2	1	3	1	1	22	16.3
ſ	10.8by10.8	2	1	4	3	1	2	1	1	15	11.1
ſ	Total	25	18	21	24	14	16	9	7	135	100

Source: field Survey August, 2015

Table 4: Sizes of shops in the study area

The sizes of shops in the study area as presented in table 4 shows that 28.9% of sample population were of the opinion that, the sizes of their shops are 3.6 by 3.6m, also 28.9% of the same participants were of the opinion that their shops sizes are 3.6 by 7.2m. The table above also explained that 14.0% of the respondents were of the view that, the sizes of their shops are 7.2 by 7.2m. Meanwhile, 7.2 by 108m and received percentage values of 16.1% and 11.1%. The bar chart below in figure 6 shows the sizes of shops in the study area according to their sectors.

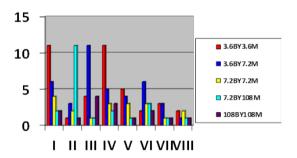


Figure 6: sizes of shops in the study area

Sector	Locations			iid Per year in t						Total	%
	of Activities	Financial institutions	Super market	Eateries	Open Market	Lock Up shops	Office	Special Market	Others		
I	Uwanse Street	000	90	65	30	60	55	00	30	330	8.2
	Edibe-Edibe Road		90	60		60	55	70		548	13.6
II	Ekpo Abasi	150			20				43		
	MbukpaRoad		85	75		65	40	00		595	14.8
III		250			25				55		
IV	HowellStreet		96	60		50	30	75		675	16.8
		300			25				60		
V	NewAirport		75	55		50	45	00		310	7.5
	Goldie Street	000			20				60		
VI			100	75		65	50	00		455	11.3
VII	Bed well Rd	000			00				65		
			120	89		70	60	75		444	11.0
VIII		000			20				65		
VIII			120	100		80	60	00		660	16.4
		200			30				70		
TOTAL		900	776	579	175	500	395	220	448	4017	100

Source: Field Survey August, 2015

Table 5: Rent paid in the commercial land use sector

Table 5 above shows the distribution of Rent paid per year in the commercial land use sector. The table reveals that 8.2% of the commercial rents are paid in sector I of the study area, while13.6% of sample population commercial rent are paid in sector II. More so, commercial rent paid in sector III, IV, V received the percentage values of 14.8%, 16.8%, 7.5% respectively. In addition, Table xx also indicate that over 11.3% of commercial rents are paid in sector VI. Meanwhile, the percentage values 11% and 16.4% of commercial rent are paid in sector VII and VIII of the study area. The evidence of this result implies that within the range of sector II, III, VI, VII and VIII high percentage of commercial rent are paid. The line graph below in figure 7 shows the rent paid in the commercial land use sector of Calabar South.

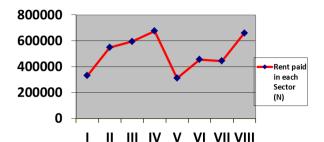


Figure 7: Rent Paid In The Commercial Land Use Sector of Calabar South

Sector	Rent	Respondent	%
I	4,000	7	6.7
II	3,000	25	25.7
III	3,000	15	14.5
IV	4,000	11	11.5
V	9,000	9	9.6
VI	4,000	7	7.0
VII	5,000	11	9.3
VII	8,000	16	15.0
Total	40,000	101	100

Source: Field Survey August, 2015

Table 6: Rent of Retail Trade outlets per month in each sector of the study area

The Rent paid per month in the retail trade outlet as presented in Table 6 revealed that 6.7 %( 4000) of monthly rent are paid in sector I of the study area, while25.7 %( 3000) of sample population of retail traders rent are paid in sector II. More so, rent paid in sector III, IV, V received the percentage values of 14.5% (3000), 11.5% (4000), and 9.6% (9000) respectively. The table also indicate that over 7% (4000) monthly rents are paid in sector VI. Meanwhile, the percentage values 9.3 %( 5000) and 15% (8000) of the monthly rent are paid in sector VII and VIII of the study area. The evidence of this result implies that within the range of sector II, III and VIII high percentage of monthly rent are usually paid.

Sector	Locations	S	ales per mon	th in the co	mmercial	Land Use	Sector(	N 0,000)		Total	%
	of Activities	Fina ncial instit ution s	Super market	Eater ies	Open Mar ket	Loc k Up sho ps	Of fic e	Spe cial Ma rket	Ot he rs		
I	Uwanse Street	000 350	230 100	120 260	10	60 80	55 55	00 70	10 13	485 933	3.0 5.9
II	Edibe- Edibe	2350 5300	285 186	175 160	5 25	115 50	40 30	00 75	15 20	3005 5776	19.0 36.7
III	Road	000	175	155	15	50	45	00	60	467	3.0
IV	Ekpo Abasi	000	200 590	275 189	12 00	15 190	50 60	00 75	65 65	865 1189	5.5 7.5
V VI	MbukpaRo ad	2200	220	180	20 10	280	60	00	70	3020	19.2
VII	HowellStre et										
VIII	NewAirpor t Goldie Street Bed well Rd										
TOTA L		1020 0	2171	1514	97	840	39 5	220	31 8	1575 5	100

Source: Field survey August, 2015

Table 7: Sales per Month in the Commercial Land Use Sectors

The sales per month in the commercial land use sector as presented in Table 7 above, shows that 3% of the commercial sales are made in sector I of the study area, while 5.9% commercial sales are made in sector II. More so, the sales in sector III, IV, V received the percentage values of 19.0%, 36.7%, 3% respectively. Table 7 also indicates that over 5.5 %

sales are made in sector VI. Meanwhile, the percentage values 7.5% and 19.2% of the sales are paid in sector VII and VIII of the study area. This result implies that within the range of sector, III, IV and VIII high percentage of sales are frequently observed. The line graph below in figure 8 shows the sales made in the commercial land use sector of Calabar South.

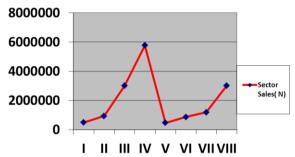


Figure 8: Sales Made In Each Sector of the Commercial Land Use of Calabar South

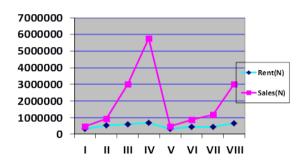


Figure 9: Correlation between Rent and Sales in The Study

Area

The line graph in figure 9 proves that there exists a close relationship between the rent paid in commercial outlet location and the sale made.

iotunom uma u	ie buie illuse.		
SECTOR	RESPONDENT	SALES	%
I	7	10,000	4.6
II	25	5,000	30.8
III	15	5,000	17.5
IV	11	2,000	8.0
V	9	4,000	7.2
VI	7	3,000	5.3
VII	11	15,000	8.0
VIII	16	15,000	18.9
Total	101	59,000	100

Source: field Survey August, 2015

Table 8: Volume of sales per day in each sector of the study area

Data presented in Table 8 shows the sales per day. From the Table, 4.6% (10000) of the sale per day are made in sector I of the study area, while 30.8% (5000) sale per day in the outlet are made in sector II. More so, the sales in sector III, IV, V received the percentage values of 17.5% (5000), 8% (2000), and 7.2% (4000) respectively. Table 8 also indicate that over 5.3 % (3000) sales per day are made in sector VI. Meanwhile, the percentage values 8% (15000) and 18.9% (15000) of the sales are made in sector VII and VIII of the study area.

Sector	I	II	III	IV	V	VI	VII	VIII	Total	%
1-10	1	1	2	3	2	1	1	2	13	12.9
10-20	2	2	1	4	2	2	1	2	16	15.8
21-50	3	3	1	1	1	4	1	2	16	15.8
51-100	4	1	3	1	1	2	2	2	16	15.8
101-	5	1	2	2	2	1	3	1	17	16.8

150										
160- 200	6	2	1	5	2	2	2	3	23	22.8
TOTAL	21	10	10	16	10	12	10	12	101	100

Source; Field Survey August, 2015

Table 9: Number of Customers Visit per Day

Table 9 above, explains the number of customers patronization per day in the selected commercial land use sector, as 12.9% of the owners of businesses said they experience 1-10 customers per day while 15.8% of the respondents (Business owners) said they experience 10-20, 21-50, 51-100 customers per day. It is also presented in table 9 that 16.8% and 22.8% of the business owners were of the view that they witness about 101-150 and 200

tirett tirej		01 100 and 200		
Sector	Daily Operation	Seasonal Operation	Respondent	%
I	6	1	7	6.9
II	25	-	25	24.8
III	15	-	15	14.9
IV	10	1	11	10.9
V	9	-	9	8.9
VI	7	-	7	6.9
VII	11	-	11	10.9
VIII	15	1	16	15.8
Total	98	3	101	100

Source: Field survey August, 2015

Table 10: The frequency of operation

The frequency of operation as presented in Table10 revealed that 6.9% of the market operate both daily and seasonal in sector I of the study area, while24.8% of sample population market are daily with no value for seasonal operation in sector II. More so, markets in sector III, IV, V received the percentage values of operations of 14.8%, 10.9%, 8.9% respectively with specific reference of no seasonal market in sector III and V. Table 10 also indicate that over 6.9% of market are daily in sector VI. Meanwhile, the percentage values 10.9% and 15.8% of the market are daily in sector VII, both daily and seasonal market operate in VIII of the study area.

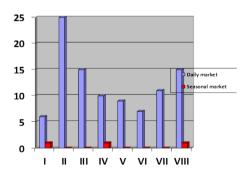


Figure 10: frequency of operation of market A. HYPOTHESES TESTING

The hypotheses for this study were tested following the objectives as analysed below;

# a. OBJECTIVE ONE AND HYPOTHESIS ONE

Objective one is to assess the difference in the location pattern of commercial Land use with rental value of commercial land use sector in Calabar South. The null hypothesis (Ho) one state that: "There is no significant difference in the location pattern of commercial land use with rental value of commercial land use sector in Calabar south."

Source of	Sum of	df	Mean	F	Sig.
variance	Squares		Square		
Between Groups	2073.087	7	296.155	14.887	.000
Within Groups	1432.300	72	19.893		
Total	3505.388	79			

Source: SPSS Data Analysis August, 2015

Table 11: ANOVA summary table for Hypothesis

#### b. INTERPRETATION OF RESULT

Based on the Output of the ANOVA analysis from Table 11, it is observed that a calculated value of 14.887 is higher than critical value of 0.00 at a degree of freedom of 79 which was tested at 0.05 level of significance, the null hypothesis (Ho) which state that there is no significant difference in the location pattern of commercial land use with rental value of commercial land use sector in Calabar south is rejected while the alternate hypothesis(H1) which state that" there is significant difference in the location pattern of commercial land use with rental value of commercial land use sector in Calabar south is accepted.

#### c. DISCUSSION OF FINDINGS

The researchers discovered that the size of shops in the study area varies from place to place. Findings in table 3 and 5 further revealed that within the sector of Ekpo Abasi, Goldie and Bedwell commercial activities are on the increase as the area experiences good sales, high rent per year and traffic congestion. This is because the areas are closer to the city centre where population is equally high. Result in figure 9 also shows that there exist a close relationship between rent paid and sales made in commercial outlet location.

In addition, the null hypothesis (Ho) one which state that, "there is no significant difference in the location pattern of commercial land use with rental value of commercial land use sector in Calabar south." Upon testing this hypothesis as contained in Table 11, it was shown that this hypothesis was rejected indicating up holding of the proposition of the alternative hypothesis stated as there exist a significant difference in the location pattern of commercial land use with the rental value of commercial land use sector.

# IV. CONCLUSION AND RECOMMENDATION

In Calabar South local government area of Cross River State, the Land use pattern has helped in providing socio-cultural reason for appearance of home based commercial Land use pattern in urban neighbourhood. It has been noted that commercial Land use pattern in the study area is commonly in a clustered form in areas such as mount –Zion

road and linear form, such as Edibe-Edibe road. Hence, commercial Land use in Southern Calabar is in emergence with the central place theory, range of goods concept and Reilly's law of gravitation which promote the development of the economic growth in the area and this has positive impact in distribution of commercial land in the area based on units or sectors of the residential areas through the periphery of the study area. From the analysis, it can be judged quantitatively that there exists significant variation in the commercial land use location pattern with the rental value of commercial land use sectors in Calabar South.

Based on the analysis and findings of this study, the following recommendations are made.

Planning standards should be widely enforced as planning mechanism are used to ensure that development is in accordance with certain minimum standards. The profession of Town planning is to effect these rules, as legally acceptable minimum standards under the extant Town Planning Laws enforceable in the study area.

Town Planning Department of the State Ministry of Lands and Housing and other government institutional Agencies like Calabar Urban Development Authority (CUDA), should have their powers expanded to regulate and control this priority development, as Land use controls are generally imposed for the general interest of the community.

As the problem of uncontrolled urban migration naturally creates huge waste disposal problems, measures should also be taken to ensure a clean and healthy environment by deploying more hands and personnel, in both the Enforcement and cleaning units. It is noted that solid waste generation is faster in generation. Public enlightenment programme should be carried out by the State Ministry of Environment to educate the public on the need, to keep clean and healthy environment. In the long run, Calabar as a whole would be the better for it as the 2017 Tourism theme of the Cross River State Government hinges of migration and the African Dilemma.

## REFERENCES

- [1] Adeniyi, K. (1997) Public transport and urban development in Nigerian. Journal of the Nigerian Institute of Town Planners, 3(1), pp. 21 31.
- [2] Berry, S. & Tenant, R. J. (1950). Urban population density for relevance concerning the commercial density gradient for Chicago urban areas for all decinnal years. Chicago: Chicago Press.
- [3] Brain J. L, Berry, J. W. & Tennant R. J. (1963). Urban population densities structure and change. Geographical Review 53, pp.38-39.
- [4] Caral K. (1958). Population density patterns: Chicago area transportation study. Research News 2, pp. 3-10.
- [5] Drapkin, D. (1977); Land policy and urban growth. U. S. A. Pergamon Press.
- [6] Oduwaye L. (2009) Spatial Variation of Values of Residential Land Use in Lagos Metropolis. African Review Vol 3(2) January 2009