

## URBAN CRISES AND RENTAL VALUES DIFFERENTIAL IN KADUNA METROPOLIS

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### Abstract

The incessant outbreak of violent conflicts in Kaduna metropolis led to enmasse intra-metropolitan population mobility and change of residence to areas perceived to be relatively safer for lives and property. The emergent of change residents has affected the values of rental properties in the metropolis. This paper examines the changes in rental values in the different residential areas as a consequence of the mobility that resulted from sectarian crises that occurred in February and May 2000. Data collected are on two time periods: mid-1999 (pre crisis period), and mid-2005 (post crisis-year) were obtained from the Estate surveyors and Property Valuer agents from 27 residential areas vulnerable to violent conflicts occurrence. The analysis of the data reveals three groups of residential areas. These are areas with increased rental values (net-population gain) which experienced higher demand for accommodation, areas with net-population loss which experienced low demand for residential apartments, as the number of people moving out from the areas out-numbered the in-coming group, hence, rental values were generally lower, areas that changed little if at all, as the number of movements into or out of the areas were fairly even.

Key Words: Urban crisis, rental values, Kaduna metropolis, violent conflicts

### Introduction

Kaduna metropolis has been a theater of violent of ethno-religious conflicts since the 1980s, there has been some degree of ethnic and religion inspired dissonance in Kaduna metropolis. These have become more frequent, more widespread and more violently destructive to life and property. Few well-known incidents of such violent conflicts whose scars are still fresh in the minds of the people and the signposts are vividly visible are: the Rigasa and Zaria crisis in 1980, the spillover of Maitasine Uprising in 1982, the Kafanchan, Zaria, and reprisal crises in 1987, the Queen Amina College crisis in 1987, the Kaduna Polytechnic conflicts in 1988 and 1992 respectively, the sectarian crisis that occurred twice in February and May of 2000, and the Miss. World Pageant Crisis of 2002 (Anifowose, 1982; Ibrahim, 1991; Kuka, 1993; Kupolati, 1995; Okoye, 1995; Adefemi and Gaskiya, 2001; Ibeanu, 2001)

Also, Egwu *et al*, (2003); Elaigwu, (2003); Tour (2003); Yakubu *et al* (2005) and observations, have revealed the fact that since 2003 rumours of planned violence or reprisals of Kano crises in 2005 and recent Jos metropolitan mayhem of 2009 crisis disturbing and intimidating the peace of the metropolis.

Thus, these incessant occurrences of violent conflicts have lead to formation of committees of Inquiry, Government White Paper, and establishment of emergency response agency, these interventions have made little or no impact in eliminating or reducing violent conflicts in the Metropolis. Fear of more violent lead to *enmasse* intra-metropolitan population mobility and residents' re-adjustment based on residents perceived safe areas. The consequences of this residential change include change in

the values of rental properties between the residential areas vulnerable to violent conflicts in the Metropolis. Thus, this paper examines the changes in rental values among the different residential areas as end result of high magnitude of sectarian crises that occurred in February and May 2000.

### Conceptual framework

If one begins by making the assumption that individuals are rational; that the level and quality of information available to them is unlimited; and that their actions are unconstrained, then one can investigate the decision-making process. For instance, the objective of the economic man is to optimize his economic and financial returns in a utilitarian fashion. These hypothetical persons will assess the information available to them on the economic benefits of alternative locations and if those benefits, or utilities, exceed those of the current place of residence relocation will occur. In this sense the decision-making process is almost mechanical and the range of criteria used to make judgments is both narrow and predetermined. This rational decision-making process in residential choice was further conceptualized and buttressed in Wolper's (1965) Place Utility Matrix theory.

Wolpert (1965) defined, "Place Utility Matrix" (UM) as a framework for studying rational decision making in the context of movement. The place Utility matrix (U) consists of variables (X) places so that 'U<sub>nm</sub>' gives the utility of place 'n' on characteristic of variables 'm'. The list of variables that is used to assess the utility of places can vary from person to person or group to group as may the relative significance, which is attached to each variable. For this latter reason to hold, it is important to multiply the place utility matrix by a vector of 'm' weights, one for each variable, which will yield a weighted place utility matrix (W). The sums of the values in the n columns of W will give scores for each place. The individual or group will then use these scores both to judge the utility of his/her current place of residence (which can be taken to be one of the n places in the matrix) *vis-a-vis* the n-1 other places and to decide which of the other places would provide the maximum utility, comfort and peaceful resident.

In the hand of the economic man the place utility matrix is a very precise decision-making instrument. The list of variables to be used is short since they merely reflect economic well-being; alternatives are assessed rationally with unlimited accurate information; and readjustments are made once sub-optimality becomes evident. If the economic man assumption is removed and replaced by the simple notion of rationality then the place utility matrix becomes rather more realistic. By this means the range of variables to be used is much enlarged, although relocation still depends upon evidence from 'W'.

In addition to economic variables, social, political and environmental forces, for example, can now be brought into play. The potential movement may use such variables as environmental stress, security of lives and property, housing quality, recreational and educational facilities, social class affiliation, employment opportunity, land availability and so on, which will weigh according to the assessment of their relative importance. In other respects, the place utility matrix (W) can be used in a similar fashion to that adopted by economic man, although the resulting decision may differ because social variables have out-weighed economic ones- socio-cultural affiliation-affinity have been weighted higher than employment opportunities etc.

However, the economist and economic geographers have found that human behaviour is by no means always rational, being at best 'boundedly rational' or in Leibensten's (1976; 1978) phrase 'selectively rational'. Hence, relocation is not necessarily a consequence, either because rational decision-making is not translated into behaviour, or alternatively, the decision-making process itself may lack logicity. It is constrained within bounds, which predetermines a sub-optimal conclusion. These affirmed invulnerability of human to scientific enquiry, human inclination to oscillate residence and movement of people within a city is resistance response to centrifugal forces that hitherto propel people to move and buttressed by early migration progenitors. This is a modification of place utility, the guise of spatial pattern, resulted from problems of segregation, in the sense of spatial separation. In furtherance of this Udo (1978) submission that non-economic factors also induce residential choice such as issues of socio-psychological and political reasons (war, ethnic conflict, religious violence, mass-movement, and out-break of epidemics) leading to a rational albeit kinetic or coerced, decision to relocate upon which this paper is based on peoples' perception of safety of lives and properties influenced residential choice in Kaduna metropolis after 2000 sectarian crises that engulf the entire residential areas except the Government Reserved Areas that are not susceptible to violent conflicts because of their socio-economic class polarization.

### Methodology

In order to be able to evaluate the impact of the movement on the rentals on property, the data collected were based on two time period: mid-1999 for a year before the crisis (base year) and mid-2005, post crisis year were sought for and obtained from the Estate surveyors and Property Valuer agents from 27 residential areas open to changes during and after violent conflicts.

Twenty-seven out of the 48 residential areas that is 56% of the residential areas were purposively selected based on their vulnerability to frequent violent conflicts occurrences. The remaining 44% of the residential areas which were excluded from the study were mainly the Government Reservation Areas (GRA) that are not prone to violent conflicts. The major reason advanced for the non-vulnerability of these residential areas to crises or direct participation in violent conflicts is because the areas are inhabited largely by higher brass of elites and senior citizens/bourgeois and political stalwarts (typically referred to as the Kaduna Maifia)

The rental values (in naira) were collected for three bedroom type of accommodation in the 27 sampled residential areas or quarters. The choice of this type of rental property is informed by it's accessibility to all sundry of rungs of socio-economic class strata of residents. These values were subjected to percentage (%) change analysis in order to know where the rents were hiked and to relate the changes to the pattern of intra-metropolis residential choice; that is how demand for houses influenced the change. Similarly, the two time periods were further subjected to student't'-test to discover statistical significance of rental values variation (Siegel, 1956 and Chapman and Charles, 1993).

### The study area

Kaduna metropolis is the capital of Kaduna State. The Metropolis is located between latitudes  $10^{\circ} 20' N$ ,  $10^{\circ} 39' N$  and longitudes  $07^{\circ} 22' E$ ,  $07^{\circ} 31' E$ . The metropolis occupies an area of about  $260km^2$ ; the distance between the eastern and western limits



Table 1: Rentals Value (in Naira) of Three Bedrooms Flat Apartment in the Selected Study Areas of Kaduna Metropolis 1999 -2005

S/N	LOCATION	Pre-crisis Mid-1999 (X <sub>1</sub> )	X <sub>1</sub> - X̄	(X <sub>1</sub> - X̄) <sup>2</sup>	Post-crisis Mid-2005 (X <sub>2</sub> )	X <sub>2</sub> - X̄	(X <sub>2</sub> - X̄) <sup>2</sup>	% Btw 1999 & 2005
1	Kawo	24,000	-2,655.56	7,051,998.914	90,000	15,377.78	236,476,117.7	+275.00
2	Ungwar-Dosa	20,600	-6,055.56	36,669,806.91	70,000	-4,622.22	21,364,917.73	+239.81
3	Badarawa	20,000	-6,655.56	44,296,478.91	20,000	-54,622.22	2,983,586,918	0.00
4	Ungwar-Sarki	55,000	28,344.44	803,407,278.9	86,000	11,377.78	129,453,877.7	+54.55
5	Ungwar-Rimi	35,000	8,344.44	69,629,678.91	85,000	10,377.78	107,698,317.7	+142.86
6	Ungw. Kanawa	25,000	1,655.56	2,740,878.914	60,000	14,622.22	213,809,317.7	+140.00
7	Ungwar-Shanu	18,000	-8,655.56	74,918,718.91	18,000	-56,622.22	3,206,075,798	0.00
8	Abakpa	30,000	3,344.44	11,185,278.91	85,000	10,377.78	107,698,317.7	+183.33
9	Tudun-Nupawa	24,000	-2,655.56	7,051,998.914	30,000	-44,622.22	1,991,142,518	+25.00
10	Panteka	30,000	3,344.44	11,185,278.91	45,000	-29,622.22	877,475,917.7	+50.00
11	Badiko	24,000	-2,655.56	7,051,998.914	45,600	-29,022.22	842,289,253.7	90.00
12	Tudun-Wada	20,000	-6,655.56	44,296,478.91	18,600	-56,022.22	3,138,489,134	-7.00
13	Ungwar-Sanusi	17,500	-9,155.56	83,824,278.91	18,000	-56,622.22	3,206,075,798	+2.86
14	Ungwa. Muazu	18,000	-8,655.56	74,918,718.91	45,000	-29,622.22	877,475,917.7	+150.00
15	Kabala-West	18,600	-8,055.56	64,892,046.91	60,000	14,622.22	213,809,317.7	+222.58
16	Ung.Television	30,000	3,344.44	11,185,278.91	95,000	20,377.78	415,253,917.7	+216.67
17	Rigasa	30,000	3,344.44	11,185,278.91	18,600	-56,022.22	3,138,489,134	-38.00
18	Nassarawa	25,000	1,655.56	2,740,878.914	65,000	-9,622.22	92,587,117.73	+160.00
19	Kudanda	18,500	-8,155.56	66,513,158.91	75,000	377.78	142,717,738	+305.41
20	Ungw. Sunday	30,000	3,344.44	11,185,278.91	95,000	20,377.78	415,253,917.7	+216.67
21	Ungwar-Yelwa	30,500	3,844.44	14,779,718.91	105,000	30,377.78	922,809,517.7	+244.26
22	Zokoriko	18,000	-8,655.56	74,918,718.91	85,000	10,377.78	107,698,317.7	+372.22
23	Ungwar-Boro	40,000	13,344.44	178,074,078.9	150,000	75,377.78	5,681,809,718	+275.00
24	Gonin-Gora	20,000	-6,655.56	44,296,478.91	105,000	30,377.78	922,809,517.7	+425.00

25	Sabon-Tasha	35,000	8,344.44	69,629,678.91	150,000	75,377.78	5,681,809,718	+328.57
26	Ungwar-Romi	35,000	8,344.44	69,629,678.91	110,000	35,377.78	1,251,587,318	+214.29
27	Narayi	28,000	1,344.44	1,807,518.914	120,000	45,377.78	2,059,142,918	+328.57
ΣX		719,700		1,899,066,666.57	2,147,800		35,764,151,175.86	
Mean (X̄)		26,655.56			74,622.22			
STD		8,546.404251			37,088.33072			

Source: Field work (2006)

$$\begin{aligned}
 T - \text{Test formula: } t &= \frac{\text{Mean } X_1 - \text{Mean } X_2}{\sqrt{\frac{\text{std}_1^2}{X_1} + \frac{\text{std}_2^2}{X_2}}} \\
 &= \frac{26,655.56 - 74,622.22}{\sqrt{\frac{(8,546.404251)^2}{27} + \frac{37,088.33072^2}{27}}} = \frac{47,966.66}{1,644.76 + 7,137.65} = 5.46
 \end{aligned}$$

From Table 1 the degree of freedom of sampled size is 52 but degree of freedom for 52 is not represented on critical table 't'. However, it is closer to 60 when compared to 40 of which both are represented in the critical 't' values. Thus, 60 degree of freedom is applied. Under the level of significance for two-tailed test at 5 percent level. The critical 't' value is 2.000 while the calculated 't' is 5.46. Hence, calculated 't' is greater than the table 't' at the 5 percent confidence level that is calculated 't' is statistically significant at 5 percent level, which means that the rental values between years 1999 and 2005 must have been induced by imbalance intra-metropolitan migration as result of effects of violent conflicts experienced by residents in their various source regions in year 2000. This is further supported by the in between Mid-years percentage change (%) that indicates either positive (+) if the price charges in the previous year has increased or negative (-) if the price/value charges in the previous year compared to prevailing price has dropped.

The analysis depicts the intensity of inter-residential movement spurred by the magnitudes of early 2000's crises. These statistical significances were further substantiated by common factors that enhance metropolitan population movement. These include lack of confidence of residents on the security in source regions, and perceived security at destination areas as identified by the Estate surveyors and Property Valuer in the various residential areas sampled.

The computations also bring out three different residential areas which spatially spread across the four Local Government Areas that made up the Metropolis; namely areas with increased immigrants, areas with increased emigrants and areas that are hardly affected by in-or-out migration.

The first group, are areas with increased rental values (net-migration increase), these areas experienced higher demand for accommodation, hence percentage changes were positive. This has probably resulted from the fact that these areas received more immigrants that is experienced relatively high influx of people which caused an increase in the demand for accommodation out-stripping supply. The analysis revealed,

that 48% of the selected residential areas fall within this category, they are: Ungwar-Kanawa; Ungwar-Rimi; Ungwar-Television; Nassarawa, Kudanda; Ungwar-Sunday; Ungwar-Yelwa; Zokoriko; Ungwar-Boro; Gonin-Gora; Sabon-Tasha; Ungwar-Romi and Narayi,

The second groups are areas with a declined in net-migration that is there were more emigrants than immigrants, these areas experienced low demand for residential apartment, as the number of people moving out from the areas out-numbered the incoming group, hence, rental values were generally lower. As a result of this, percentage changes were negative (-). These areas constitute 41% of the selected residential areas. They include; Kawo, Ungwar-Dosa, Badarawa, Ungwar-Shanu, Tudun-Nupawa, Panteka, Badiko, Tudun-Wada, Ungwar-Sanusi, Ungwar-Muazu, and Rigasa.

The third group which constitute 11% of the entire study areas are; Ungwar-Sarki, Abakpa and Kabala-West. In these areas, rented values changed little if at all. However, this does not mean that there were no movements into or out of the areas, but acquisition of rentable apartments does not have remarkable financial significant (See Fig. 1 for detail location of these residential areas).

### Conclusion

The structure of inter residential choice in Kaduna metropolis operates within the scaffold of Wolpert (1965) place utility matrix and economic concept of utility maximization of Ian and Kenneth (2006). These concepts stipulates that the ultimate goal of all human beings is to maximize their personal utility or sense of happiness that reflects the gravity of socio-psychological forces that can act externally on a person as a push factor, leading to rational, albeit kinetic or coerced, decision to relocate residence to areas perceived to be relatively secured for their lives and properties within a given micro-geographical area, as it is currently in vogue in Kaduna metropolis where residential areas with comparative safety have influx of residents and hike charges of rental properties.

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