

PATTERN OF RESIDENTIAL MOBILITY IN KADUNA METROPOLIS, NIGERIA

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ABSTRACT

Residential mobility is the mechanism whereby the character of social areas is maintained or changed; hence residential mobility has been a focus of intense research for the past few decades. However, in spite of the notable works in the area, many factors influencing residential mobility are still shrouded in obscurity. Against this background, the study examines the pattern of residential mobility in Kaduna metropolis. Data on socio economic characteristics of the respondents, cultural factors, reasons for relocation and distance moved were collected in the field by the use of questionnaire. This study used logit model to carry out analysis on the factors of residential mobility in the metropolis. The result of the logit model shows that the factor of religion reliably predicted the residential mobility within the metropolis. The analysis of the directional movement of households along religious divide shows a directional bias but with less precision as reversal flows were also evident. The lesson from this finding is that more effort should be geared towards research on residential mobility, as a unique factor of religion; hitherto, not given adequate attention in the literature is a major factor of mobility in Kaduna metropolis.

INTRODUCTION

Residential mobility is primarily a response to a change in housing needs (Gobillon, 2008). Numerous studies have shown propensity to move is associated with a number of factors such as age, life-cycle stage, education, occupation, tenure, duration of residence, cost of rent and location relative to the center of the city. These factors have frequently been found to discriminate 'movers' from 'stayers'. Other reasons include realtors' involvement in the search process and tendency of households to maximize expected utility (Speare, 1974; Olatubara, 2008). Mobility and migration have always been of great interest to spatial demographers, because it is the mechanism whereby the character of social areas is maintained or changed (Clark and Withers, 2007).

The movement of households within an area is an increasingly important issue which has attracted renewed research interest over the years (Ahmed, 1995; Pawson and Bramley, 2000; Oishi, 2010). However, in spite of the notable works in the area, many factors influencing residential mobility are still shrouded in obscurity. For instance, little is known about the residential mobility between neighbourhoods that brings about changes in the patterns of ethnic segregation (Bolt and van Kempen, 2010). Residential segregation is defined in general terms as "the degree of spatial proximity or territorial conglomeration of families belonging to the same social group, be it in terms of ethnicity, age cohort, religious preference, or socioeconomic status" (Nieves, 2004; Limon, 2010). Reardon and O'Sullivan (2004) and Pisati (2009) conceived residential segregation as "the extent to which, within a given geographical area (for example, a city), individuals belonging to different social groups live in neighborhoods characterized by different social compositions". Krysan (2002) explains further that "residential segregation is one outcome of a complex system in which prejudice, segregation,

discrimination, and racial or ethnic economic disparities are simultaneously determined. Each of these phenomena influences the others. As a result of their complexity, these relationships are difficult to study, but most scholars recognize that racial and ethnic prejudice and discrimination are both causes and consequences of residential segregation". Olatubara (2008) explained that urban residential mobility is a complex process, which in turn has significant imprint on the urbanscape.

Beatty *et al* (2009) stated that residential mobility impacts on neighbourhood renewal in complex ways. On the one hand, mobility amongst individuals may be seen as positive, in that it may reflect access to better housing or employment circumstances. On the other hand, high levels of mobility in deprived areas can be problematic, being often associated with decreasing social capital, increasing problems around social cohesion and increasing demands on local services. The reason for and the pattern of moves are so complicated both at the micro and macro levels that they make it difficult for one to predict. Hence, Animashaun (2011) suggested the need for empirical verification of residential mobility in several cities. Thus, empirical verification of residential mobility is necessary in Kaduna metropolis as the significant political, social and economic transformations the metropolis has witnessed over a period of 15 years (1997 to 2011) would be difficult to understand without considering the role of the significant population movements within the region.

THE STUDY AREA

Kaduna metropolis is the capital of Kaduna State (Fig.1). It is located between latitudes 10° 22' 00" - 10° 40' 00" N and longitudes 7° 20' 00" - 7° 28' 00" E (Adewuyi, 2008). The metropolis occupies an area of about 260 km², and the distance between the eastern and western limits of the city is approximately 13.7km though this keep changing as development increases. It is made up of four Local Government Areas: Kaduna North, Kaduna South, Igabi and Chikun. Historically, Kaduna metropolis became prominent as a result of being the administrative capital of Northern Nigeria Protectorate from 1912 to 1917 and headquarters of North Central State from 1967 to 1975 (the North Central State was made up of Zaria and Katsina provinces). In 1975 the name changed from North Central State to Kaduna State but Kaduna metropolis remained the capital and maintained its sphere of influence.

The population of Kaduna metropolis is distributed over high, medium and low density residential areas of the city. The low density residential areas are the Government Residential Areas (GRAs) of Malali in the northern part of the city and Barnawa in the southern part of the city. The medium density residential areas are the areas located not far from the city centre, while the high density residential areas are typical of the Ungwas, for example, Ungwan-Sarki, Ungwan-Kanawa, Ungwan Rimi, and Ungwan-Boro.

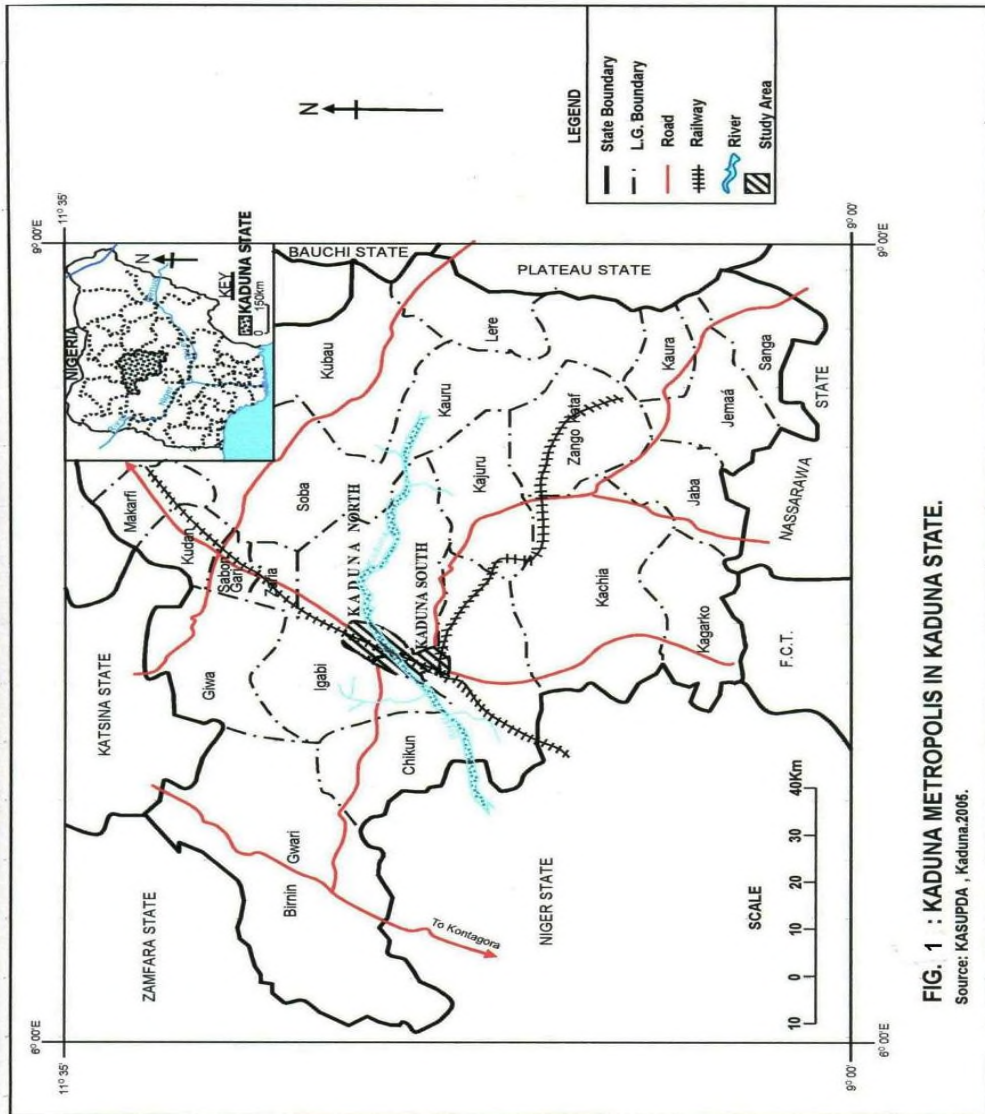


FIG. 1 : KADUNA METROPOLIS IN KADUNA STATE.

Source: KASIPDA, Kaduna, 2006.

Kaduna is inhabited by various ethnic and religious groups. The low density and the medium density residential areas of the city are not dominated by any particular ethnic or religious group. However, some parts of the metropolis are dominated by certain ethnic and/or religious groups. For instance, Ungwan Boro, Ungwan Pama, Ungwan Makama, Ungwan Romi and Sabo areas of the metropolis are dominated by Christians and heterogeneous ethnic groups. On the contrary, Ungwan Rimi, Ungwan Sarki, Ungwan Muazu, Ungwan Kanawa, Tudunwada and Rigasa are dominated by Muslims and Hausa/Fulani ethnic groups.

DATA COLLECTION TECHNIQUES AND ANALYSIS

The categories of data used for this study were basically two. The primary data via field survey were the key data to this research. Questionnaires were administered in the field to derive data on socio-economic and cultural characteristics of the respondents such as age, sex, income, marital status, educational qualification, access to information, religion, ethnicity, migration history etc. The secondary data were obtained from documentary sources such as the National Population Commission (NPC) reports and Kaduna State Urban Planning and Development Authority (KASUPDA).

Reconnaissance survey was first carried out in the study area. This was done to get acquainted with the various census tracts and the neighbourhoods where the research would take place. During the reconnaissance survey, the boundary of the four Local Government Areas (LGAs) and the Wards within them were identified. In the Kaduna North LGA, nine Wards were identified, in the Kaduna South LGA, seven Wards were identified, in Chikun LGA, four Wards were identified, while in Igabi LGA, only one Ward was identified as part of the study area.

A pilot survey was carried out at Janruwa (a census tract in the study area) to test the adequacy of the survey instruments for the research and to gain experience ahead of the main survey. During the survey, field assistants administered instruments for the study after intensive training on field work was conducted for them.

The National Population Commission (NPC) survey of locality and subsequent demarcation into Enumeration Areas (EAs) was used as the spatial frame for the household sampling. The projected 1991 National population figures were used for this study. This is because by 2011, the 2006 population figures are yet to be disaggregated into wards and localities. In this study, the national growth rate of 2.8 percent is preferred to the Kaduna State growth rate of 3.2 percent for the data to have national acceptability. The lower limit of 5 persons per household was applied from the national household range of 5-7 (NPC: 1991) to derive the average number of households in each of the localities within the metropolis. The lower limit of household size (5 persons) was used to generate a larger number of households from the total population figure from which samples were taken. The sample size for the study was 0.3 percent of households. The sample size was used because the households' number in the metropolis was fairly large; hence, the sample size of 0.3 percent gave a very large number of households which when carefully selected across the metropolis was representative enough for the opinion of the respondents. The sample size consists of 1036 households out of the total household's number of 345,236. However, 1020 were returned which is 98 percent of the sample size.

Stratified-systematic sampling technique was employed in selecting the respondents. This design was used in order to allow the respondents to be chosen only by chance so as to avoid any kind of bias and for a proper representation of the study area. This could not be divulged from the fact that the population of the study area is recorded along census tracts (NPC: 1991), thereby making each of the census tracts to stand as a

stratum and due to the heterogeneous nature of the study space in terms of ethnicity and religion.

The data was subjected to analysis. The analysis involved a systematic examination of data in order to understand patterns and to identify cause and effect relationships between the dependent and independent variables. Residential mobility (the dependent variable) was seen as a function of independent variables of household characteristics: religion, race/tribe, age, sex, marital status, household size, income, educational status and job/employment. Analysis of data was carried out by the use of logit model.

RESULTS AND DISCUSSION

This study suggests that residential mobility is influenced by ethnic, religious and socio-economic factors; hence, a logistic regression analysis was performed with residential mobility as the dependent variable and age, income, marital status, family size, tribe and religion as predictor variables. Table 1 shows the results of how the probability of change of residence in Kaduna metropolis depends on ethno-religious and socio-economic factors. Table 1 gives the coefficients, the Wald Statistic, associated degrees of freedom and probability values for each of the predictor variables. The P-value is compared with alpha level ($\alpha = 0.05$). The P-value of 0.005 shows that only religion reliably predicted the residential mobility within Kaduna metropolis while the P-values of age, income, marital status, family size and tribe which are 0.204, 0.954, 0.754, 0.074 and 0.468 respectively show that this group of independent variables does not reliably predict the residential mobility within the metropolis. However, this does not override the fact that these variables may have contributed to the mobility process in one way or the other.

The recurring religious crises that bedeviled Kaduna metropolis over the years have significant influence on the residential mobility of the region. Mudashir (2013) noted that while the Muslims at the southern part of the metropolis like Sabo Tasha and Narayi sold their houses and relocate to the northern part, the Christians who owned houses at the northern part of the metropolis like Tudun Wada, Rigasa and Kawo sold them and relocate to the southern part. This has brought a unique pattern of residential mobility in the metropolis that is comparable to the Schellings (1971, 1972, 1974, 1978, 2006) model of residential tipping which showed how the preferences of autonomous individuals about where to live give rise to (unanticipated) aggregate patterns of residential segregation. The movements of households across the four Local Government Areas (LGAs) of the metropolis are examined and in so doing, it provides clues about stratification processes (Graif, 2012). Table 2 shows the direction of households' movement in the metropolis.

Table 1: Logistic Regression for Residential Mobility in Kaduna Metropolis

	B	S.E.	Wald	df	Sig.	Exp (B)
Step 1 ^a Age	.010	.008	1.613	1	.204	1.010
Income	.000	.000	.003	1	.954	1.000
Marital Status	-.039	.126	.098	1	.754	.961
Family Size	-.035	.020	3.196	1	.074	.966
Tribe	-.033	.046	.527	1	.468	.967
Religion	-.475	.170	7.788	1	.005	.622
Constant	.677	.459	2.173	1	.140	1.968

a. Variable(s) entered on Step 1: Age, Income, Marital Status, Family Size, Tribe, Religion

TABLE 2: Direction of Households Movement in the Metropolis

From	Religion	To					Grand Total
		KDNLGA	KDSLGA	CLGA	ILGA	Total	
KDNLGA	Christian	12	15	31	-	58	146
	Muslim	45	37	-	6	88	
KDSLGA	Christian	12	18	33	-	63	217
	Muslim	43	77	3	31	154	
CLGA	Christian	5	17	33	-	55	70
	Muslim	3	6	1	5	15	
ILGA	Christian	1	5	3	-	9	33
	Muslim	7	8	-	9	24	
TOTAL							466

Source: Households Survey, March 2011

MOVEMENT OF HOUSEHOLDS FROM KADUNA NORTH LOCAL GOVERNMENT AREA

Kaduna North Local Government Area (KNLGA) plays an important role in changing the structure of the whole metropolis. It is the administrative Headquarter (HQ) of the Kaduna State Government. The mobile households from KDNLGA of the metropolis constituted 31 percent of all those who moved within the metropolis. The 31 percent accounts for the movement of 146 out of 466 sampled mobile household (Table 2). A total of 57 households out of the 146 mobile households in the KDNLGA relocated within the Local Government Area. The people that relocated within the Local Government were made up of 21 percent Christians and 79 percent Muslims. The majority of these people changed their residence within the Local Government Area (LGA) because of space requirement. They needed a more comfortable accommodation, so they changed house.

A total of 52 households (about 36 percent) of the 146 households that moved from KNLGA moved into Kaduna South Local Government Area (KDSLGA). These mover households were made of 29 percent Christians and 71 percent Muslims. There is a part of the KDSLGA called Tudunwada. The place is largely inhabited by Muslims, hence most of the movers from the KNLGA who are Muslims moved to Tudunwada for socio-cultural reasons.

A total of 21 percent (31 households) of the mover households from the KDNLGA moved into Chikun Local Government Area (CLGA). All the households that moved from KDNLGA into CLGA are Christians. These people moved for socio-political and cultural reasons. Chikun LGA is largely inhabited by Christians. The people that moved into this region did so largely because of security of lives and properties. Kaduna metropolis is bedeviled by ethno-religious crises; hence, Christians decide to relocate to this part of the metropolis that is majorly populated by the people of Christian faith.

About 4 percent, consisting of 6 households of the households that moved from KNLGA moved into Igabi Local Government Area (ILGA). Interestingly, unlike the households that moved into CLGA, the movers from the KDNLGA into ILGA are 100 percent Muslims. Igabi LGA is a Muslim enclave. Rigasa, a neighbourhood in this region harbours Islamic fundamentalists. Any Christian that lives in this community is presuming to commute him or herself to suicide because it's just a matter of time, such person will be eliminated. At Rigasa, security personnel's are more vigilant because the security agents are subject to attack in the neighbourhood. The people, basically Muslims that migrate to this zone from KDNLGA, do so for socio-political and cultural reasons. They moved into this region for safety of their lives and properties. This is because they are well protected in the environment by living among people of the same religion.

Figure 2 shows the direction of movement of households from Kaduna North Local Government Area of the metropolis.

Pattern of residential mobility in Kaduna metropolis, Nigeria

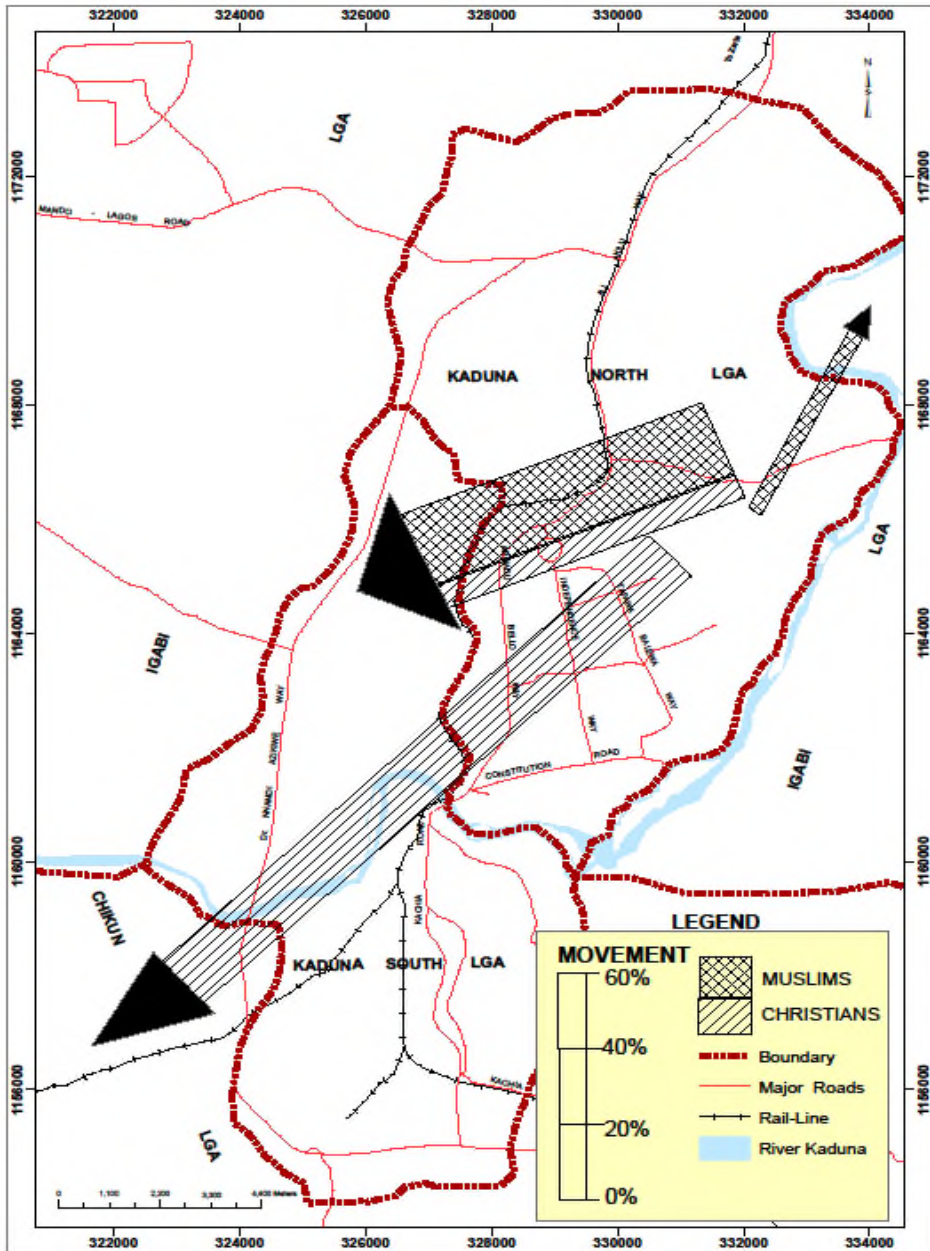


FIG 2: Movement of Households from Kaduna North LGA to other LGAs

MOVEMENT OF HOUSEHOLDS FROM KADUNA SOUTH LOCAL GOVERNMENT AREA

Table 2 shows that the highest movement of households within the Kaduna metropolis was from KDSLGA. The mobile households from this LGA were made of 217 households representing about 47 percent of the 466 households that actually moved within the metropolis. Figure 3 shows the direction of movement of households from KDSLGA of the metropolis. A substantial portion of the mobility occurs within the Local Government. A total of 95 households representing 44 percent of the 217 households that actually moved relocated within the LGA. Most of these movers relocated for comfortable accommodation in terms of space and facilities and a few moved as a result of nearness to work. The households in this category were made up of 19 percent Christians and 81 percent Muslims. Kaduna South Local Government Area is the industrial base of the metropolis. In this LGA are situated Textile industries, Peugeot Automobile Nigeria (PAN) Ltd, Queensway Aluminum, IBBI Breweries, NOCCACO Cable and Wire industries, Coca-Cola bottling company and 7-up bottling company amongst others. Therefore, the residents of this LGA are more of company workers and self employed than the civil servants.

Fifty-five households, representing 25 percent of the mover households from KDSLGA moved to KDNLGA. The movers were made of 22 percent Christians and 78 percent Muslims. The proportion of the Christians and Muslims that moved to KDNLGA is similar to those that moved from KDNLGA to KDSLGA. This is why Graif (2012) noted that geographic proximity between two neighbourhoods and similarity in socio-demographic characteristics shape inter-neighbourhood connectivity based on residential mobility flows.

Pattern of residential mobility in Kaduna metropolis, Nigeria

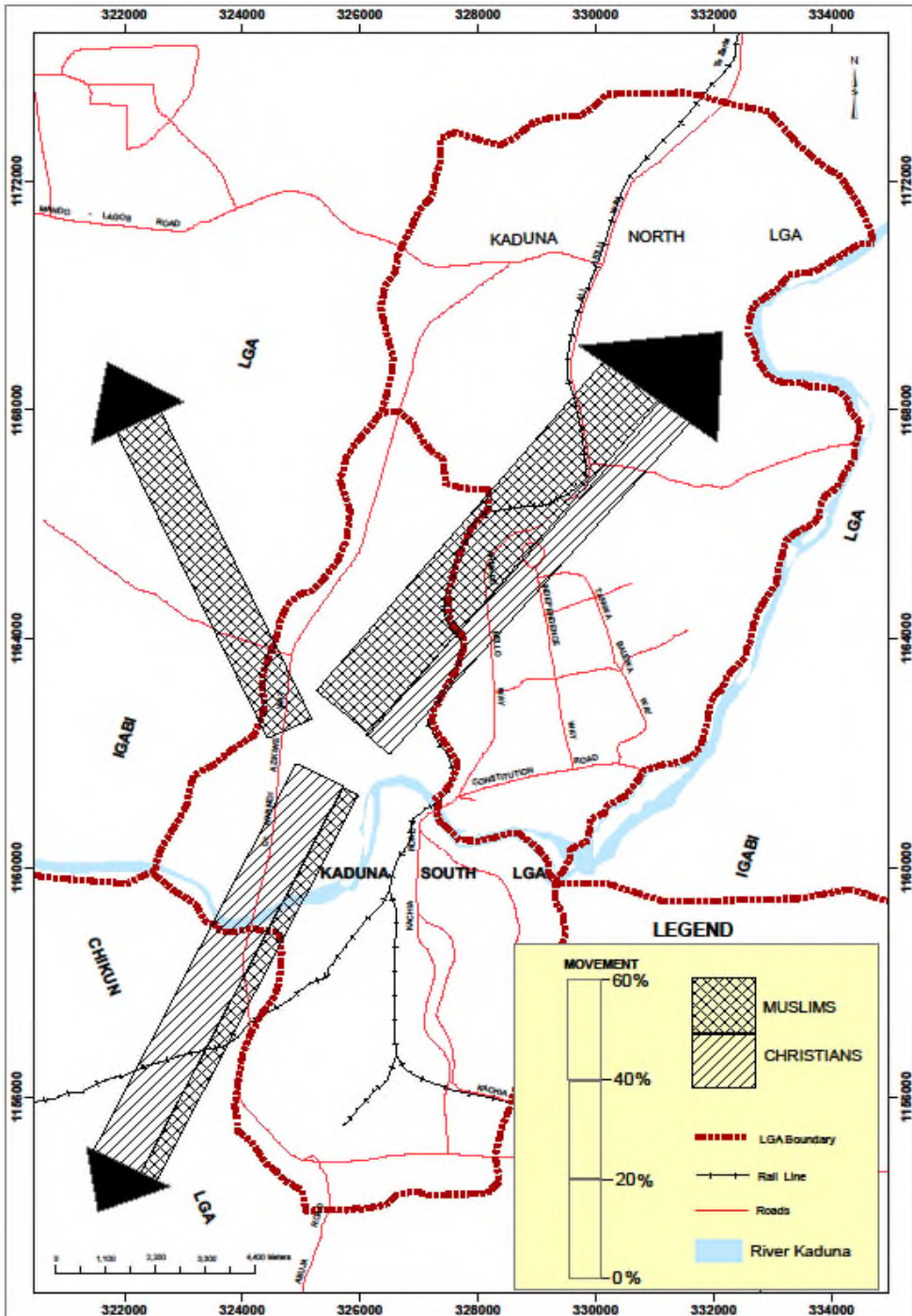


FIG 3: Movement of Households from Kaduna South LGA to other LGAs

The Central Business District (CBD) of the metropolis is situated in KDNLGA, hence people moved there for business activities. The Federal and State Government Secretariats are there, hence, the civil servants moved there, so as to be nearer their place of work. People also moved from KDSLGA to KDNLGA for personal reasons.

About 17 percent of the movers from this Local Government Area comprising of 36 households moved to Chikun LGA. The movers were made of 92 percent Christians and 8 percent Muslims. This is similar to the 100 percent Christians that moved from KNLGA to Chikun LGA. The movement of households to this LGA is largely influenced by religion. Chikun Local Government Area is a Christian enclave. The 8 percent of movers from KDSLGA to CLGA that were Muslims did so for multifarious reasons. For instance, these are Muslims that are neither Hausas nor Fulanis. They feel more secure, living among their tribes or even among the Christians. This is because they can be grouped along with 'infidels' during any religious crises while living in a Muslim dominated community.

About 14 percent of the movers comprising 31 households moved from KDSLGA to ILGA. All the households that made the moves were 100 percent Muslims. The reason for this residential behaviour is not farfetched as ILGA is a Muslim enclave.

MOVEMENT OF HOUSEHOLDS FROM CHIKUN LOCAL GOVERNMENT AREA

Chikun LGA is situated at the southern part of the metropolis. Figure 4 shows the direction of movement of households from this Local Government Area. The LGA is largely inhabited by Christians. Chikun LGA accounts for 15 percent of the mover households within the metropolis. This is because 70 households moved from Chikun LGA out of the 466 mover households in the metropolis. Thirty-four households representing about 49 percent of the 70 households that moved from this LGA actually relocated within the LGA. They comprise of 97 percent Christians and 3 percent Muslims. Most people that live in Chikun LGA are either self-employed or company workers. This could be because CLGA share boundary with KDSLGA (the industrial base of the metropolis). The households that relocated within the LGA did so for comfortable accommodation.

About 11 percent of the households representing 8 families moved from CLGA to KDNLGA. They comprise of 63 percent Christians and 37 percent Muslims. A total of 23 households moved from CLGA to KDSLGA. These households are 33 percent of the movers from Chikun Local Government Area. These were 74 percent Christians and 26 percent Muslims. Seven percent of the mover households from Chikun, that is, five households moved from CLGA to ILGA. The movers from Chikun LGA to Igabi LGA are 100 percent Muslims.

Pattern of residential mobility in Kaduna metropolis, Nigeria

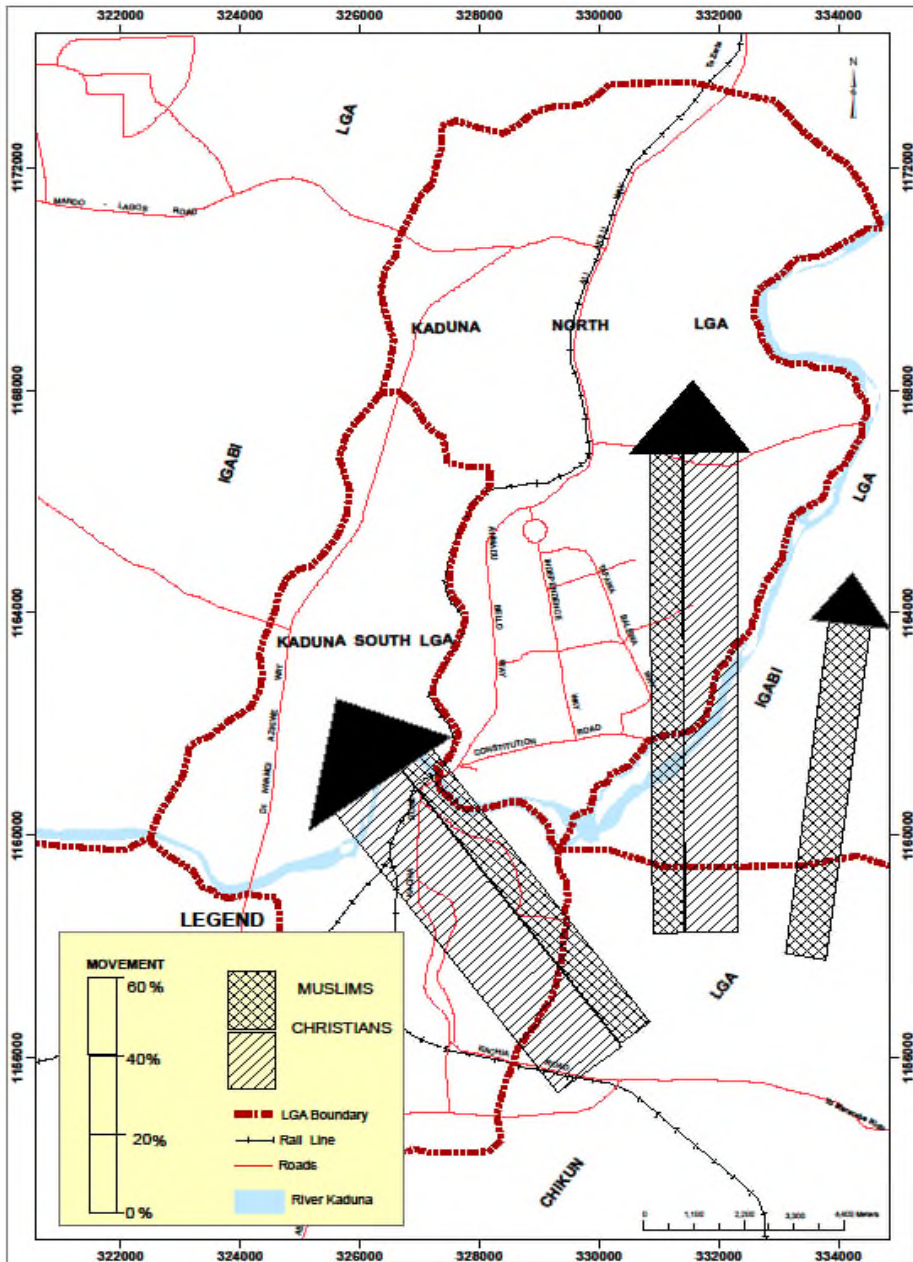


FIG 4: Movement of Households from Chikun LGA to other LGAs

(IV) MOVEMENT OF HOUSEHOLDS FROM IGABI LOCAL GOVERNMENT AREA

Igabi Local Government Area (ILGA) recorded the least proportion of movers within Kaduna metropolis. This is because out of the total number of 466 mover households in the metropolis, Igabi LGA contributed only 33 households which are about 7 percent of the movers in the metropolis. Figure 5 shows the direction of movement of households from ILGA of the metropolis. The residential structure is fairly stable in this LGA. However, in this LGA, about 27 percent representing 9 households relocated within the LGA. All the households in this category are Muslims so the reason for their change of residence is just for better accommodation. Some of the movers relocated to KDNLGA. The movers in this category were 8 households representing 24 percent of the mover households from ILGA. These were made of 13 percent Christians and 87 percent Muslims. These households moved to KDNLGA so as to be nearer their places of work and for trading activities. A greater number of mover households in Igabi, about 39 percent, moved to KDSLGA. These comprise of 38 percent Christians and 62 percent Muslims. About 9 percent of the movers from Igabi Local Government Area relocated to Chikun Local Government Area. These were all Christians.

Pattern of residential mobility in Kaduna metropolis, Nigeria

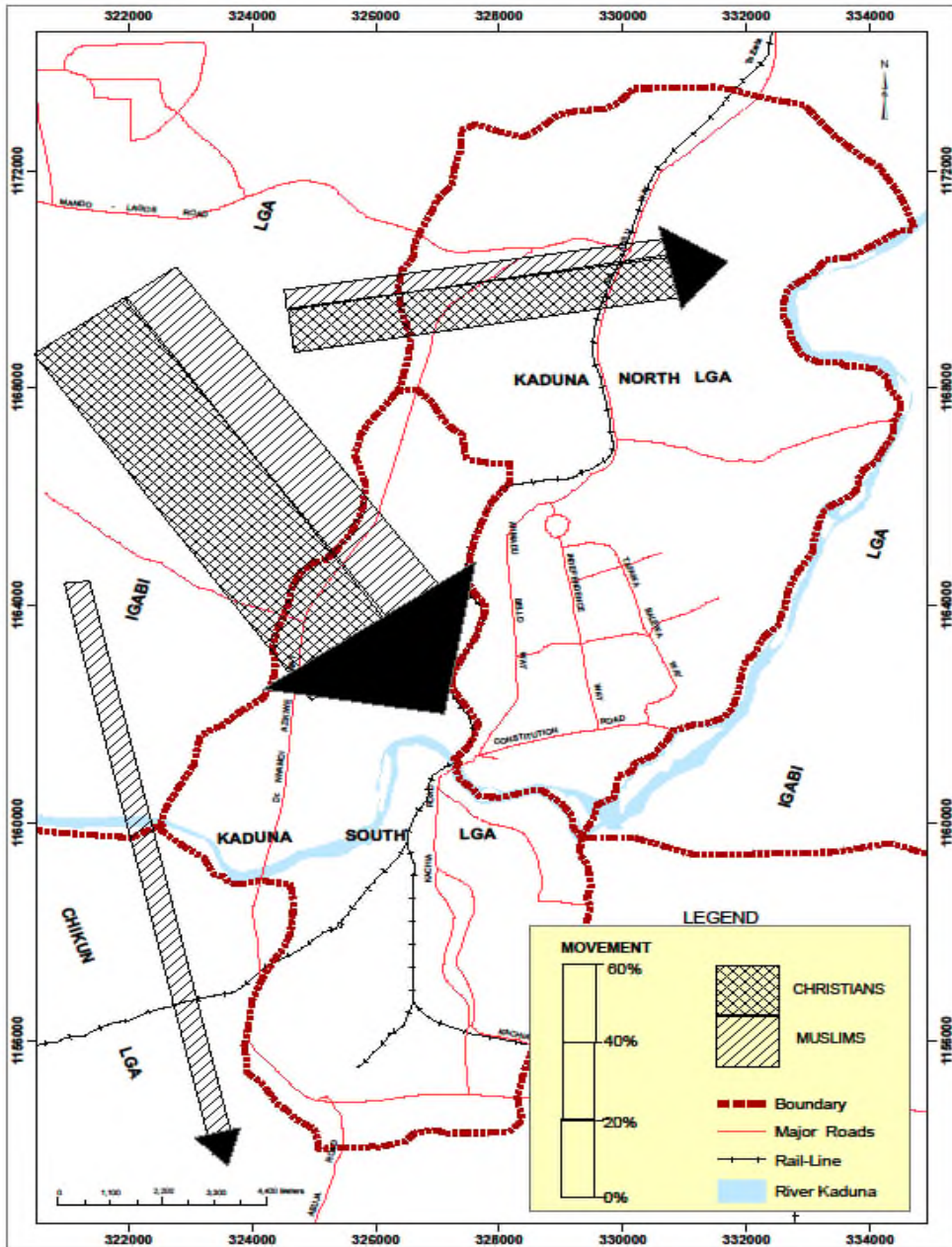


FIG 5: Movement of Households from Igabi LGA to other LGAs

CONCLUSION

The outcome of the logit model shows that the factor of religion reliably predicted the residential mobility within the metropolis. From the analysis of the directional movement of mover households and in particular their religion, a directional bias was observed but with less precision as reversal flows were also evident. However, it was observed that Kaduna North Local Government Area and Kaduna South Local Government Area are liberal Local Government Areas when considering the factor of residency and religion. This observation is completely different from the situation at Chikun and Igabi LGAs, as the two Local Government Areas are highly restricted residential neighbourhoods.

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