

RESIDENTIAL SEGREGATION: EXPLORING PATTERNS, DETERMINANTS AND IMPLICATIONS IN ZARIA URBAN AREA

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Abstract

Residential segregation is a significant social phenomenon that influences access to resources, social interactions, and socio-economic disparities within urban areas. Residential segregation refers to the spatial separation of different racial, ethnic, or socioeconomic groups within a particular area or city. It has significant implications for social inequality, access to resources, and quality of life. This research focused on the patterns, determinants and implications of residential segregation in Zaria urban area. The study provided insights into the complexities of residential segregation in this specific context. Data for this research was sourced through both primary and secondary sources. Questionnaire was the tool for primary data collection. Purposive sampling technique was adopted in selecting the units within urban Zaria. Respondents for the study were selected via systematic sampling technique at every 6th respondent interval. Major findings revealed that urban Zaria is segregated based on socio cultural factors. The study showed that religion and ethnicity are the major determinants of residential segregation in urban Zaria. The findings of this research contribute to the understanding of residential segregation in Zaria urban area, provide valuable knowledge for policy makers and urban planners. It will also promote social cohesion, equitable distribution and fostering inclusive communities.

Keywords: Segregation, Residential, Zaria, Urban area

Introduction

Residential segregation is a widely researched urban phenomenon in both developed and developing countries. The researches in the area has led to a prolific body of literature including the development of scientific measures of segregation (K'Akumu and Olima, 2007). Residential segregation is a form of segregation that sorts population groups into various neighbourhood contexts and shapes the living environment and social space at the neighbourhood level. The residential neighbourhoods are often classified and segregated based on a variety of peculiarities. Landrine and Corral (2009) referred to residential segregation as the geographical separation of whites from ethnic minorities in residential areas. Williams and Collins (2001) define residential segregation as the physical separation of the races in residential contexts. Aliyu, Salihu, Rozilla and Mohammad (2012) opined that, it is the process where two or more communities that formerly lived together separate because of some factors. This could be because of either religious or ethnic reasons.

In Africa, the segregation of the natives from the Europeans came about through colonisation. Segregation was said to be suggested in 1897 (as a general health measure) when mosquitoes

were discovered to cause malaria (Gale, 1980). However, it was not adopted until 1908 due to the outbreak of the plague in Accra (Ghana) a disease reported to have claimed the lives of six million people in India between 1898 and 1907. The Colonial Office thus saw the introduction of the disease as a threat; hence, in 1910 it gave them more grounds to enforce segregation. Gale (1980) however opined that there were other important factors that made segregation popular in Northern Nigeria. The people in that region had no prior contact with the Europeans, thus, there were no merchants or professionals who could speak English. Social contact was so difficult thus leading to a more formal and distant type of relationship between the two groups.

Nigeria has a long history of urban development both in the northern and southern parts where a substantial number of the cities existed centuries before the advent of colonial rule with Lagos and Ibadan being the largest and most populous. Kano is the largest of the Hausa cities in northern Nigeria. Kano grew to prominence as the center of a prosperous agricultural district and as a major terminus of the trans-Saharan trade. It remains a major commercial, transportation, industrial, and administrative center. Other important cities include Yoruba cities of Ogbomosho, Oyo, Ife; the Hausa cities of Zaria, Katsina, and Sokoto; and the newer, colonial-era cities of Kaduna, Jos, and Enugu (Edewor, 2011).

Although the country as a whole is experiencing rapid urbanization, individual cities have unique peculiarities in terms of histories and characteristics. A brief survey of this diversity will provide a more nuanced understanding of Nigerian cities. Nigeria provides diverse examples of historical urban development. A useful distinction that could enhance understanding is the classification of the cities into indigenous and non-indigenous. This distinction basically refers to the development or emergence of city relative to the colonial period. By implication, indigenous cities are those which originated prior to the period of the British colonial rule while those planned and constructed during the colonial period (1900-1960) are non-indigenous.

The residential pattern that existed in pre-colonial Nigerian cities was altered by the advent of British colonialism. The urban political structure of the colonial era was completely different from that of the pre-colonial era. The European administration led to the creation of new settlements in Northern Nigeria called the "Sabon Gari" (that is new town in Hausa Language) which was first established in Kano around 1911. At this time, Kano was already an Islamic city and was populated by the *Kanawa* (the indigenous Kano people). These settlements were established to house servants and labourers of the Europeans, and non-natives of the North. Edewor (2011) reported that prior to colonial rule, there was a heterogeneous form of settlement (there were people of various tribes and nationalities living together) in the Northern Nigeria (for example in Kano), where citizenship was based on residence and occupation. However, the British resolved to put an end to this residential pattern. Spatial, legal and psychological boundaries between social, ethnic, or racial categories were imposed to enforce a clear division between so-called races and ethnic groups to make these categories visible, in everyday life.

The Sabon Gari settlements are now found not only in the northern Nigerian cities but also in the southern Nigerian cities and their peculiarities derive from their unique demographic compositions, social orientations and religious characteristics. The Sabon Gari settlements in the Hausa-Fulani dominated northern Nigerian cities are inhabited by southern Nigerian migrants, while those in the Yoruba dominated south-western Nigeria are domiciled by the Hausa Fulani settlers (Albert, 1993). Its abridged version, *Sabo*, became popular in south-western Nigeria and they are found in such Yoruba cities as Ibadan, Ijebu-Ode and Sagamu. In Igbo dominated eastern Nigeria, the Hausa-Fulani settle in the 'Abakpa' Quarters. These are, however, stranger settlements established by the strangers themselves through their continuous aggregation in

given locations within the urban system. They are, however, patterned after the “Sabon Gari” settlements, which were established during the colonial era.

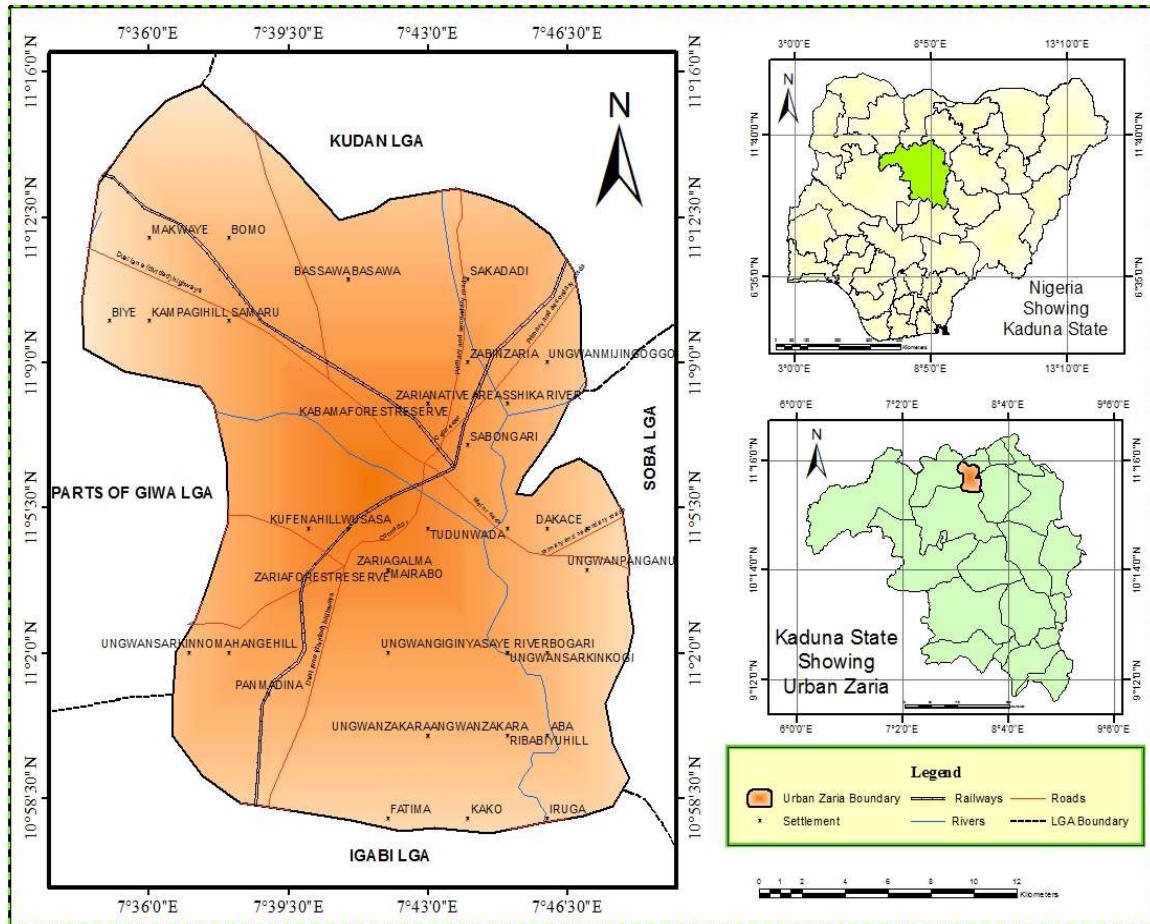
Worthy of note is that the colonial pattern of residential segregation in the northern cities was not chosen by Nigerians themselves. Rather, it was deliberately established and enforced by the colonial power. In Zaria, during the first decade of colonialism, heterogeneous population of migrants sprang up outside the city walls, in the present site of Sabon Gari. It was populated by the people from different parts of Nigeria, who had come to Zaria as a result of the railway and cotton ginnery. Some of the indigenes of Zaria even came and settled there. However, by early 1920s the British began to entertain some fears. They envisaged that this community of diverse people might create a situation that would not be in their (the British) interest. They felt threatened by the existence of this heterogeneous population domiciled in Sabon Gari. Consequently, they issued an order stating that Muslims must not live in Sabon Gari. They also enforced the regulation that non-indigenes could not live in Zaria old city. At the same time, the British reserved for themselves the Government Reservation Area (GRA) (Perchonock, 1994). Eventually, the residential pattern of Zaria metropolitan area came to be a totally segregated one, dividing the indigenes from non-indigenes, Christians from Muslims, and the Europeans from Africans. This was a completely different picture from what obtained in the pre-colonial period in which everyone, regardless of ethnic origin had settled within the city walls (Edewor, 2011).

Residential segregation give rise to a kind of structure which made conflict between the different separate communities that had been created inevitable. This was essentially because the cities were characterized by a hierarchy of citizenship rights in which some individuals had more opportunities and more access to societal resources than others. This situation perfectly suited the needs of the colonial power that sought to keep Nigerians internally divided so that they could not present a united front against colonial oppression. The strategy was very successful but it created problems which are still much part of Nigerian life some four and half decades after independence and they continue to perpetuate the interests of neo-colonialism (Edewor 2011).

Materials and Methods

Study Area

Zaria Metropolis is located between latitude $11^{\circ} 3' N$ and $11^{\circ} 15' N$ and longitude $7^{\circ} 3' E$ and $7^{\circ} 50' E$ and it is about 686m above sea level. In terms of total land area, it covers about 45,567Km², with a population 408,198 people as at 2006 (NPC 2006). It consists of two Local Government Areas; Zaria Local Government and Sabon-Gari Local Government. It falls within the tropical savannah (Aw) climate, according to Koppen’s World Climate Classification. It lies in the natural vegetation of the Northern Guinea Savannah, some 80 km North of Kaduna town, along the major high way from Kaduna to Kano State. The area spread from Shika sub-settlement in the North to Dutsen Abba sub-settlement in the south west and from Dambo sub-settlement in the east to Wusasa sub-settlement in the west (Figure 1)



Source: Adapted from the Administrative Map of Kaduna State (2020)

Materials and Methods

A reconnaissance survey was carried out as a first step in the execution of this study. Oral interview and observation were conducted by the researcher of the various neighbourhoods on residential segregation.

The primary data source for the study was gathered through interview using structured questionnaire. The research method employed in mapping out the resident's segregated areas consisting of pre-field survey using mobile topographer, data on the number of areas, capturing the coordinates of each of the areas, geo-referencing it, and then digitizing it within the GIS software environment.

Map of the study area was extracted from the administrative map of Kaduna State obtainable from the States Ministry of Land and Physical Planning by scanning and digitizing the base map. Historical information on settlement growth, neighbourhood population from National Population Census 2006, Journals, textbooks, thesis on related topics and other relevant information from the Internet were also used.

Sample size and Sampling Techniques

Steely and Yamane formula as expressed by Isreal (1992) on sample size was used to select the sample size from the population of the selected wards (349,613).

$$n = \frac{N}{1+N(e)^2}$$

Where:

n = sample size

N = total population size under investigation

1= constant

e = 95% level of confidence

$$\text{Therefore: } n = \frac{N}{1+N(e)^2}$$

$$n = \frac{349613}{1+349613 (0.0025)}$$

$$n = 399.9$$

Therefore, the sample size n = 400

Table 1 shows the number of questionnaire administered in each of the areas under study. The number of questionnaire administered in each of the areas is based on the projected population size of the area. The population size according to the NPC 1996 of the selected communities was 117 013 and the projected population size as at 2016 of the selected community is 349,613.

Table 1: Selected Neighbourhoods and Sample number

Name of neighbourhood	Population census (1991)	Projected Population (2016)	Sample number	Percentage (%)
Kwarbai ward	29195	50718	58	14.5
Tudun Wada	42,778	74313	85	21.25
Gyallesu	21712	37718	43	10.75
Kufena	13,800	23973	27	6.75
Tukur Tukur	15195	26397	30	7.5
Chikaji	12644	21965	25	6.25
Dogarawa	6889	11,962	15	3.75
Samaru	15,168	26,350	30	7.5
Hanwa	9002	15,639	18	4.5
Muchiya	34,871	60,578	69	17.25
Total	201,251	349,613	400	100

Source: Field Survey, 2020

Purposive sampling technique was used to select communities for the study. Because the research is an urban-based study, the communities were selected based on the level of their urbanization in the study area. A systematic sampling technique was used for sampling the respondents for interview. Copies of questionnaire were administered to households within the communities at a random starting point and continued at every 6th interval.

Results and discussion

Factors Determining the Pattern of Residential Segregation

Investigation into the major factors that influence respondents' choices of place of residence shows that Culture/Religion accounts for 55% of the sampled respondents, whereas economic reasons come second with 26%. Security influences the decision of 12% of the respondents while 4% attribute their reason to good planning of the environment. This finding is not surprising because the emergence of Sabon Gari in Northern Nigeria is to accommodate nonnatives who predominantly are non-Muslim and Hausa speaking. Those who choose economic reason on the other hand are mostly those who prefer to settle very closely to sources of their businesses, affordability of housing, nearness to market and motor parks.

Residential segregation persists in virtually every major city in the world. The rise of income inequality in particular has led to sustained segregation between members of disparate socio-economic communities. While the negative effects of segregation are well documented, the rapid growth of suburbs, and the subsequent spread of poverty therein, presents new questions and the effect of residential segregation on metropolitan areas as a whole (Corey Chen 2014). The factors discussed have an important role in influencing respondent's decision in the choice of neighbourhood.

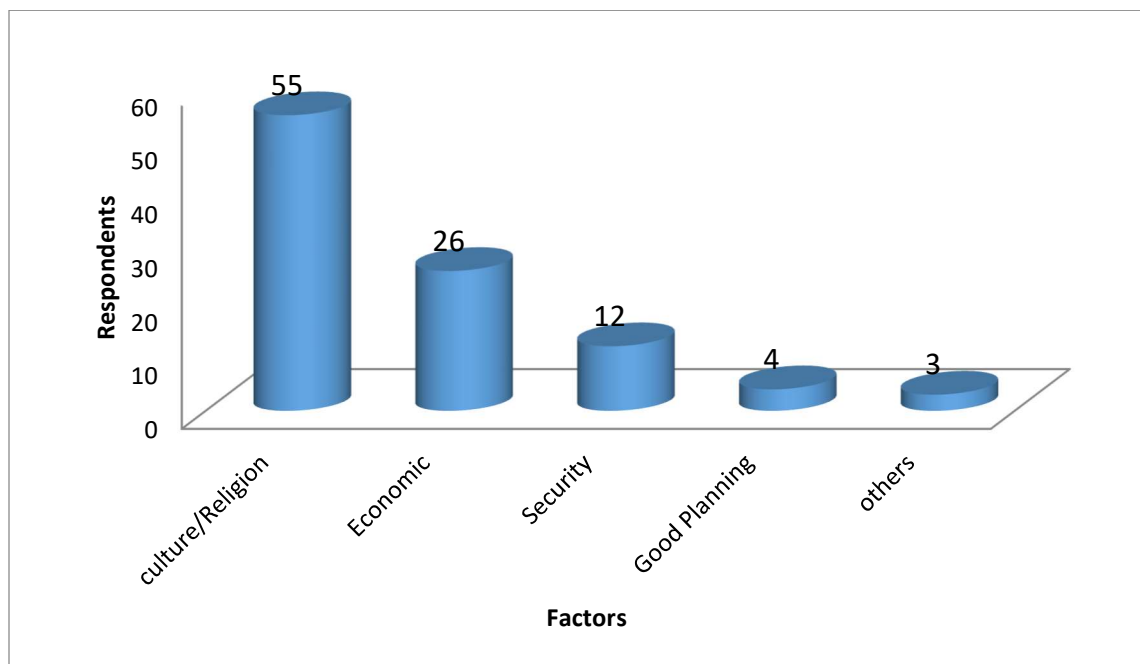


Figure 2: factors that influence residential segregation

Source: Field Survey, 2020

Pattern of Residential Segregation in Zaria Metropolis

In this section the place of residence of respondents was cross tabulated with some socio-economic characteristics of the respondents such as, religion, ethnicity and occupational backgrounds. Table 2 shows the pattern of residential segregation in Zaria Metropolis.

Table 2 Cross tabulation between Area of Residence and Religion

Area of Residence		Religion			Total
		Islam	Christianity	Others	
Kwarbai	Count	50	1	0	51
	% within Area of Residence	98	2	0	100
Tudun Wada	Count	68	27	0	95
	% within Area of Residence	71.6	28.4	0	100
Gyallesu	Count	36	11	0	47
	% within Area of Residence	76.6	23.4	0	100
Kufena	Count	4	25	0	29
	% within Area of Residence	13.8	86.2	0	100
Tukur Tukur	Count	23	2	0	25
	% within Area of Residence	92	8	0	100
Chikaji	Count	18	0	2	20
	% within Area of Residence	90	0	10	100
Dogarawa	Count	7	8	0	15
	% within Area of Residence	46.7	53.3	0	100
Samaru	Count	14	15	0	29
	% within Area of Residence	48.3	51.7	0	100
Hanwa	Count	22	2	0	24
	% within Area of Residence	91.7	8.3	0	100
Muchiya	Count	43	16	0	59
	% within Area of Residence	72.9	27.1	0	100
Total	Count	285	107	2	394
	% within Area of Residence	72.3	27.2	0.5	100

Source: Field Survey, 2020

Table 2 provides the cross tabulated information between place of residence and religion of residents. The essence here is to show whether religion plays a very significant role in residential segregation. Going by Table 2, it is obvious that Muslims are the majority of the inhabitants in areas such as Kwarbai (98%), Tukur-Tukur (92%), Chikaji (90%), Hanwa (91.7%) and Muchiya (72.9%). On the other hand, Christians are dominant at Kufena (86.2%), Dogarawa (53.3%) and Samaru (51.7%). What this finding indicates is that residential neighbourhoods in Zaria are influenced by religious affiliation of residents. Figure 3 present a map of the study area which shows the neighbourhood segregation based on religion of the respondents.

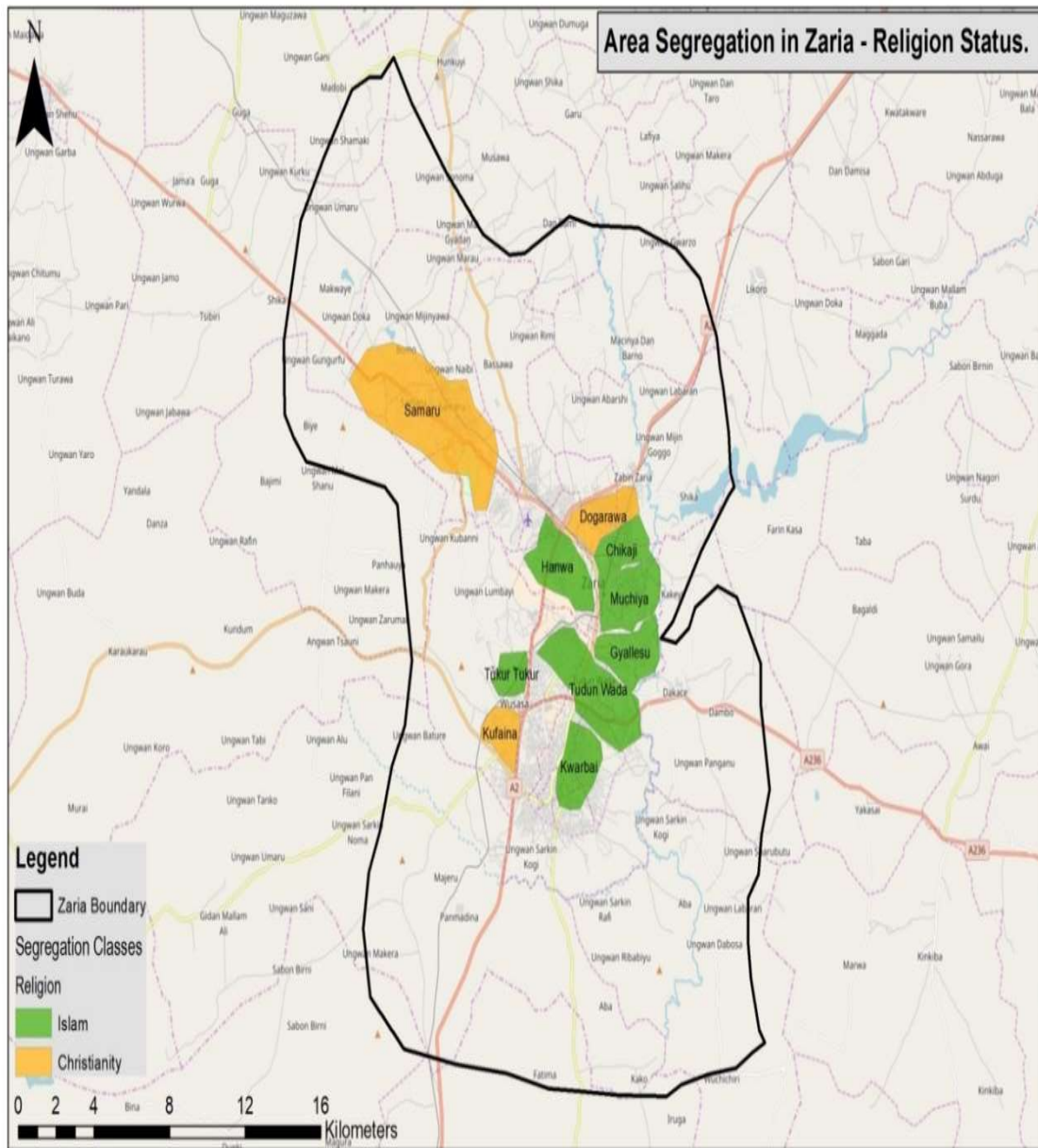


Figure 3: Map of Zaria Metropolis Showing the Pattern of Residential Segregation Base on Religion

Source: Field Survey 2020

Table 3 also explores the relationship between area of residence and ethnicity of the respondents. From the Table it is obvious that Hausa are the dominant group resident at Kwarbai (94.1%), Tukur-Tukur (60%), and Hanwa (83.3%). The Yoruba are dominant at Chikaji (40%), they also have sizeable concentration of 46.7% at Dogarawa.

Table 3 Cross tabulation between Area of Residence and Ethnic Groups

Area of Residence		Ethnic Groups				Total
		Hausa	Yoruba	Igbo	Others	Total
Kwarbai	Count	48	0	1	2	51
	% within Area of Residence	94.1	0	2	3.9	100
Tudun Wada	Count	42	28	8	17	95
	% within Area of Residence	44.2	29.5	8.4	17.9	100
Gyallesu	Count	21	10	9	7	47
	% within Area of Residence	44.7	21.3	19.1	14.9	100
Kufena	Count	4	2	12	11	29
	% within Area of Residence	13.8	6.9	41.4	37.9	100
Tukur Tukur	Count	15	4	0	6	25
	% within Area of Residence	60	16	0	24	100
Chikaji	Count	4	8	2	6	20
	% within Area of Residence	20	40	10	30	100
Dogarawa	Count	0	7	8	0	15
	% within Area of Residence	0	46	53.3	0	100
Samaru	Count	8	8	11	2	29
	% within Area of Residence	27.6	27.6	37.9	6.9	100
Hanwa	Count	20	4	0	0	24
	% within Area of Residence	83.3	16.7	0	0	100
Muchiya	Count	30	9	9	11	59
	% within Area of Residence	50.8	15.3	15.3	18.6	100
Total	Count	192	80	60	62	394
	% within Area	48.7	20.3	15.2	15.7	100

Source: Field Survey, 2020

The Igbo are dominant at Dogarawa (53.3%), Kufena (41.4%) and Samaru (37%). For other tribes Kufena has the highest concentration (37.0%) and this is followed by 30% at Chikaji. It is glaringly clear that there is a kind of relationship between ethnic concentrations of migrants from Southern

part of the country in the study area. For instance, Igbo and Yoruba are the dominant groups at Dogarawa and Samaru with cumulative percentages of 100% and 65.5%. It could also be observed in Table 3 that wherever Igbos and Yorubas dominate other ethnic group are also in sizeable number. Figure 4 present a map of Zaria metropolis showing segregation by ethnicity. In the Figure 4, neighbourhoods are categorised based on the level of ethnic segregation that is highly segregated, moderately segregated and low segregation neighbourhoods.

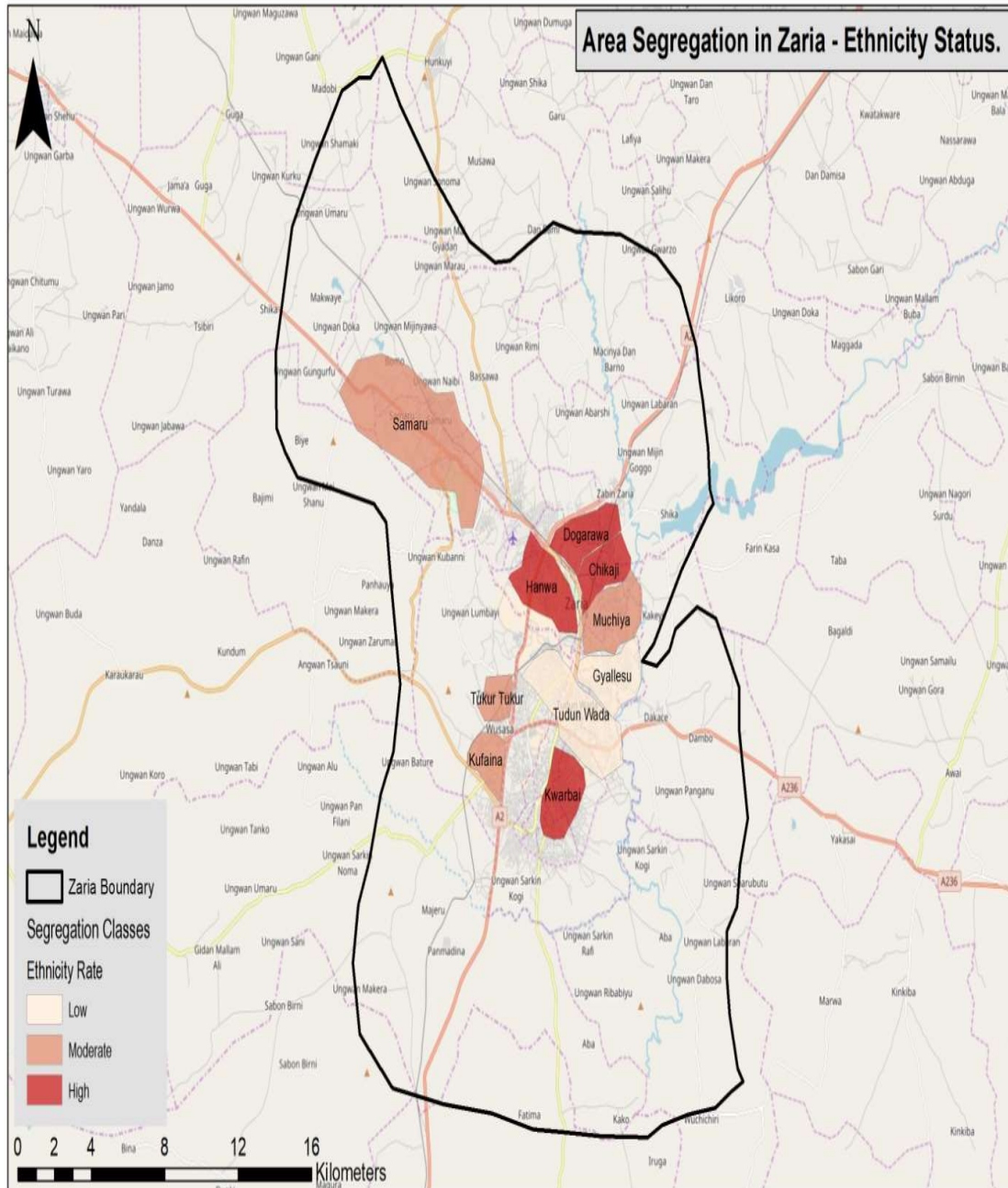


Figure 4 Level of Ethnic Segregation

Source: Field Survey, 2020

Table 4 depicts the relationship that exist between occupation of respondents and their place of residents.

Table 4 Cross Tabulation Between Occupation and Area of Residence

Area of Residence		Occupation				
		Civil Servant	Trading/ Business	Farming	Others	Total
Kwarbai	Count	37	4	0	10	51
	% within Area of Residence	72.5	7.8	0	19.6	100
Tudun Wada	Count	34	30	9	22	95
	% within Area of Residence	35.8	31.6	9.5	23.2	100
Gyallesu	Count	20	13	4	10	47
	% within Area of Residence	42.6	27.7	8.5	21.3	100
Kufena	Count	13	2	7	7	29
	% within Area of Residence	44.8	6.9	24.1	24.1	100
Tukur Tukur	Count	11	8	0	6	25
	% within Area of Residence	44	32	0	24	100
Chikaji	Count	0	10	8	2	20
	% within Area of Residence	0	50	40	10	100
Dogarawa	Count	0	13	0	2	15
	% within Area of Residence	0	86.7	0	13.3	100
Samaru	Count	11	12	0	6	29
	% within Area of Residence	37.9	41.4	0	20.7	100
Hanwa	Count	16	6	0	2	24
	% within Area of Residence	66.7	25	0	8.3	100
Muchiya	Count	9	28	16	6	59
	% within Area of Residence	15.3	47.5	27.1	10.2	100
Total	Count	151	126	44	73	394
	% within Area of Residence	38.3	32	11.2	18.5	100

Source: Field Survey, 2020

Based on the information in Table 4, it is clear that civil servants are the dominant groups at Kwarbai (72.5%) and Hanwa (66.7%). On the other hand Traders and businessmen are more at Chikaji (50%) and Dogarawa (86%). Farmers are also prominent at Chikaji (40%), Muchiya (27.1%) and Kufena (24%), this could be due to the fact that these areas falls within the fringe belt of Zaria.

The research reveals that the patterns of residential segregation in the study area are based mainly on religion, ethnicity and occupation. The Figure 5 presents the pattern of residential segregation in the study area.

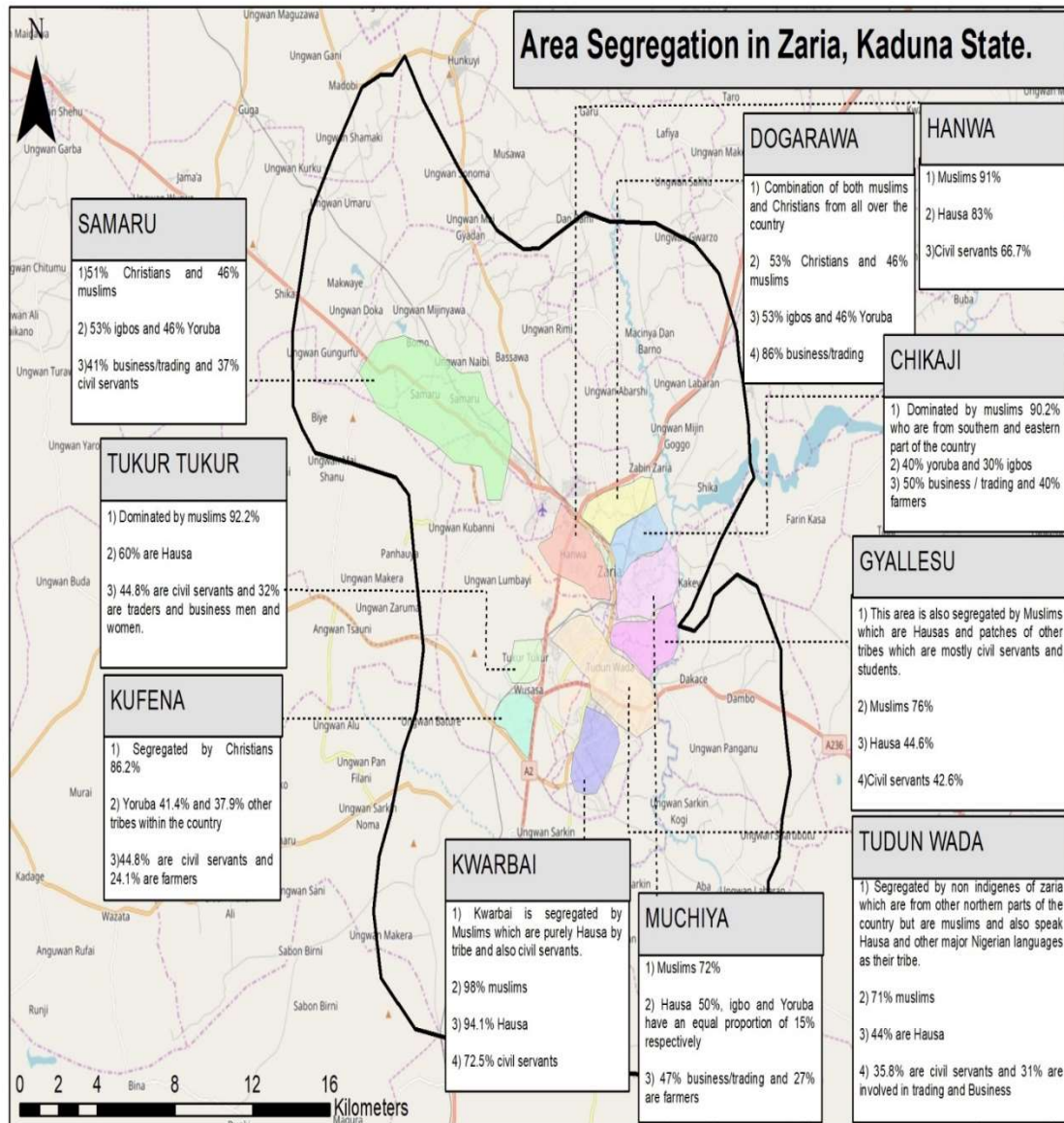


Figure 5: Map on the Pattern of Segregation in Zaria Metropolis

Source: Field Survey, 2020

From Figure 5, Zaria metropolis is segregated by a number of factors which include religion, ethnicity and occupation.

Implications of residential segregation

Information in Table 5 reveals whether religion poses security threat in residential segregation. Table 5 shows a cross tabulation between religious beliefs and opinion of respondents on whether segregation facilitates security threat. From the table, 63.6% of Muslims and 78.3% of Christians as well as 50% of adherents of other religions stated yes. Going by this finding one can infer that security concern is very critical to residential segregation in the study area.

Table 5: Cross Tabulation on whether Religion poses Security Threat

Religion		Do Residential segregation pose security threat		Total
		Yes	No	Total
Islam	Count	182	104	286
	% within Religion	63.6	36.4	100
Christianity	Count	83	23	106
	% within Religion	78.3	21.7	100
Others	Count	1	1	2
	% within Religion	50	50	100
Total	Count	266	128	394
	% within Religion	67.5	32.5	100

Source: Field Survey, 2020

Table 6 shows the view of respondents on the implications of residential segregation in the study area. These implications include disparities in income, education, healthcare access and employment opportunities. Income disparities can have a significant impact on segregation, this reflects differences in wealth and economic opportunities. 67% are of the view that segregation lead to income disparities while 33% are against income disparities due to segregation.

Table 6; Socio Economic Impacts of Residential Segregation

<i>SOCIO ECONOMIC CONSEQUENCES (DISPARITIES)</i>	<i>RESPONDENTS VIEW YES %</i>	<i>RESPONDENTS VIEW NO %</i>	<i>TOTAL (100)</i>
<i>Income</i>	67	33	100
<i>Education</i>	51	49	100
<i>Health care access</i>	71	29	100
<i>Employment Opportunities</i>	82	18	100

Source: Field Survey, 2020

Education disparities can also have a significant impact on residential segregation which include school quality and access to quality educational resources. 51% of the respondents view access to quality school education as an impact of segregation while 49% view segregation has no impact on education.

Health care access disparities could also contribute to and perpetuate residential segregation through unequal distribution of facilities, differences in health outcomes between neighborhoods, health insurance coverage and mobility. 71% of the respondents sees segregation as a major impact on health care access and 29 % are of the view that segregation does not bring about health care disparities.

Employment opportunities through job distribution, commuting patterns and residential choices, economic inequality are all impacts on residential segregation on employment opportunity. 82% have a negative view that residential segregation has caused disparities on employment opportunities while 18% view segregation as not a cause of disparities on employment opportunities.

Conclusion

Segregation remains a remarkably common, persistent and a difficult challenge for cities of all types. Like many social phenomena, residential segregation grows out of simple interaction between individuals but manifests as a complex resilient phenomenon at the scale of the city. The major findings of the study reveal that residential segregation exists in Zaria and there seem to be relationship between segregation and socio-economic characteristics of the respondents. For instance, religion, occupation and tribe play a prominent role in the decision of the respondents with regards to the choice of where to stay.

Recommendations

- i. There is a urgent need on the part of individuals, non-governmental organizations, as well as local and state government to collaborate in order to proffer a long lasting solution to this contending issue. If this could be done, there would be equality and peaceful coexistence. Therefore, people would continue to live in a harmonious manner with one another irrespective of their cultural background, religious inclination, ethnic background, native inclination or indigeneship. Residential investments across the area would eventually be enhanced in the study area.
- ii. There is need for the government to provide adequate infrastructure, proper implementation and enforcement of housing policies and zoning laws in the study area, as it was observed that such policies are not adhered to.
- iii. Finally, more emphasis should be placed on the public through enlightenment and seminars on the importance of living together, peaceful and mutual coexistence; teaching of good morals and religious instructions; since Islam and Christianity are the major religions in Nigeria. A platform should be created once in a while where both Christians and Muslims would be gathered to share about their religious belief and relate with one another under a conducive atmosphere.

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