

# Framework of the Existing Patterns of Residential Segregation and Housing Quality in Nigeria

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## Abstract

Residential segregation, the spatial separation of population sub-groups within a given geographical area, is a phenomenon which is prevalent in both developed and developing countries like Nigeria. This study sought to contribute to existing knowledge by reviewing the existing patterns of residential segregation and housing quality in Nigeria, and developing a framework for the existing patterns of residential segregation and housing quality. The study established that the existing residential segregation patterns are based mainly on religion, ethnicity, age and income; and the factors responsible for residential segregation in the study area are individual and aggregate socioeconomic characteristics, individual preference/taste/choice of neighbourhood and political/institutional factors. While the indicators of housing quality in the study area are building design, type of roofing and wall materials, condition and age of buildings, the type of internal facilities and the source of lighting. And the framework showed that there is a relationship between the factors responsible for residential segregation and housing quality in the study area.

**Keywords:** Framework, Patterns, Residential Segregation, Housing Quality, Bauchi

## 1. Introduction

Residential segregation is a phenomenon which is prevalent in both developed and developing countries, and has been widely researched. Most studies on this phenomenon have been found to focus mostly on racial/ethnic and income segregation, its patterns, causes and consequences, and its effects on health, and so on. Majority of these studies are based on researches from developed countries, especially the USA. Such studies undertaken are those of McClinton and Zuberi (2006); Williams and Collins (2001), Anderson et al. (2003), Edwards (1970), K' Akumu and Olima (2007), French (2008) and Farley (2010) to mention a few. However, very few researches have been conducted on residential segregation in the Nigerian context as compared to South Africa, UK and the U.S.

Nigeria is a multi-ethnic country (Asiyanbola, 2003), where ethnic differentiation has remained a critical problem in most of its cities (Dung-Gwom & Rikko, 2009, and Asiyanbola, 2003), this along with religious differences have led to violent crisis across the country. These crisis according to Dung-Gwom and Rikko (2009) have entrenched a divide in the cities which have led to the creation of residential neighbourhoods along ethnic, religious and cultural lines; particularly in the northern part of the country. One of such cities is Bauchi, a city which has witnessed several ethno-religious crisis for almost two decades. According to Osaghae and Suberu (2005) and Uchendu (2010) Bauchi witnessed ethno-religious crisis between the Hausa/Fulani and Sayawa in 1991, 1995, 2001, 2005 and 2011; the Bauchi religious crisis of Yelwa Kagadama in 1991, 2006 and 2007, and the *Boko Haram* insurgency in the neighbouring north-eastern states of Borno, Yobe and Adamawa and parts of Gombe and Bauchi, have also contributed to the emergence of religious and ethnically segregated neighbourhoods this being as a result of the fear and insecurity faced by people in these areas. According to Gambo and Omirin (2012) violent ethno-religious fracas has ushered in a new phenomenon in neighbourhood/settlement arrangement in most northern towns and cities.

Apart from the ethno-religious factor, the planning policies and laws in Nigeria have contributed to segregation. According to Nwaka (2005a),

*“The policies and institutions for urban development, where such policies existed at all, were very restrictive and myopic, especially in the critical areas of land use control, planning and the provision of infrastructure and services. Planning and housing were used as instruments of segregation and social policy - to ensure that the small community of Europeans was protected in segregated high quality residential reservations”.*

Also, the sub-division of residential areas into low, medium and high density for urban planning and development purposes (although it is a normal practice as reported by K' Akumu & Olima, 2007) has also fostered residential segregation in Nigeria. The land sub-division and development activities in Nigeria have been reported to have excessively high standards and contribute to the exclusion of the low-income groups from the formal process of land development (Garba & Salisu, n.d.). Evidence from literature has also shown that residential segregation affects housing quality (as reported by Williams & Collins, 2001), as usually the segregated group or minorities are poor and discriminatory practices tend to hinder their access to quality and

affordable housing. Housing quality in the medium and high density residential areas of the study area have over time been observed to be lower than that of the low density areas based on structural design and neighbourhood infrastructure.

A review of studies on residential segregation revealed that few scholars have studied the origin, patterns and consequences of residential segregation in Nigeria. Such studies as those of Albert (1996), Edewor (2011) and Muhammad, Kasim & Martin (2015a) have mainly focused on the role of the colonial authorities in enforcing segregation policies which have led to the establishment of stranger settlements (Sabon Gari) in Northern Nigeria. These colonial policies also led to residential segregation based on religion, ethnic group and race, and the cause of the ethno-religious crisis in some parts of the country. Gambo & Omirin (2012) through an empirical study attributed the creation of ethnic and religious settlements in some northern Nigerian cities to the ethno-religious crisis which often occur in those cities. While Obafemi & Omiunu (2014) conducted a survey on residential preference of immigrants determines ethnic segregation in Yenagoa metropolis in Nigeria, they discovered that immigrants in the study area preferred to live in the same neighbourhood as their kith and kin. Also their study revealed that segregated neighbourhoods in the study area were ethnically motivated, and the peculiarities in these neighbourhoods were largely derived from the demographic composition, social orientation and religious characteristics.

Aliyu et al. (2012) on the other hand, studied the influence of intangible location factors (such as cultural identity, safety, socioeconomic background, security, frequency of violence, religious inclination, ethnic background, indigeneship) on residential segregation in Jos, Plateau state. The survey uncovered that residential segregation in Jos was greatly influenced by these factors, and this has led to change in the residential pattern of the town. The variations and trends in the sales and rental value of residential properties were said to be greatly affected by persistent residential segregation. A survey by Muhammad et al. (2015b) studied the factors that influence residential segregation in Bauchi metropolis in Nigeria. Using descriptive statistics and multiple regression analysis the study revealed that the patterns of residential segregation in the study area are based mainly on income, religion, age and ethnicity; and the factors influencing residential segregation were identified as mainly individual and aggregate socioeconomic characteristics, and individual preference/taste/choice of neighbourhood.

Although few researchers such as those cited above have studied residential segregation and settlement patterns in some parts of Nigeria. Evidence from existing literature has shown that residential segregation leads to large differences in housing quality, and consequently health outcomes. A study by Muhammad, Kasim, Martin, Mohammed and Adamu (2015) revealed that in Bauchi residential areas differ in quality and neighbourhood infrastructure (such as access roads, water, electricity etc) with some areas being highly deprived of basic amenities. However no study has been found that developed a framework of the existing patterns of residential segregation and housing quality in Nigeria. It is against this background that this study seeks to contribute to existing knowledge by reviewing the existing patterns of residential segregation and housing quality in Nigeria, and develop a framework.

## **2. Definition and Patterns of Residential Segregation**

Residential segregation according to Ifesanya and Nwokoro (nd) 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. These include classification based on race/ethnicity, religion and economic/social status of individuals and groups within the population. Kemper (1998) defined residential segregation as the spatial separation of population sub-groups within a given geographical area such as a large city. Such sub-groups can be formally defined in terms of age, occupation, income, birthplace, ethnic origin or other measures; or the sub-groups could be specified as social minorities distinguished from the dominant groups of power differentials. In another definition, Aguilera and Ugalde (2007) defined it as the degree to which two or more groups live separately from one to another in different parts of the urban space. While Muhammad et al. (2015b) defined residential segregation as a phenomenon that brings about a divide in residential location among people living in a given area due to differences in religion, ethnicity, income level and age.

Several patterns of residential segregation have been reported to exist. People have been reported to segregate according to race/ethnicity (Gale, 1980; Edewor, 2011; Hartog & Zorlu, 2009; Albert, 1996, etc.), occupation, education, religion (Fong & Chan, 2008; Agrawal, 2008; and Shuttleworth & Lloyd, 2001), income (Anderson et al., 2003; Edwards, 1970). A research conducted by Muhammad (2015) indicated that in Bauchi state of Nigeria religion, ethnicity, income and age were the existing patterns of residential segregation. Similar to this scholar like Uchendu (2010), Edewor (2011), Gambo & Omirin (2012), Aliyu et al. (2012), and Muhammad et al. (2015b) have shown that sub-communities in Nigerian cities tend to segregate based on religion.

The tendency of people to segregate based on ethnicity and income in Nigeria was also reported by Edewor

(2011) and Muhammad et al. (2015b). A study by Muhammad et al. (2015b) also revealed the existence of residential segregation by age. However this type of residential segregation is not well documented in the African literature, however studies such as those of Nakagawa (1993) reported that in Western European cities young adults and older population are concentrated in the city centre; Sabater and Finney (2010) reported that in Britain the young adults (regardless of race) move to the suburban areas while the older families move to the urban areas; and in the USA, Winkler & Klaas (2013) reported that age segregation is increasing for older adults (60years and above) and younger adults (20-34years).

### **3. Factors Responsible for Residential Segregation**

Segregation has a plurality of causes (Leeuw et al., 2007). Several scholars have reported the possible causes of residential segregation. Clark (1991), Zubrinsky and Bobo (1996), Bayer, McMillan and Rueben (2001), Acevedo-Garcia and Lochner (2003), Boustan (2013) reported that preference and sorting by minority groups for own-race neighbours; private discrimination/racial or ethnic prejudice and racially restrictive covenants that prohibited the sale, rental, or occupancy of the specified property by members of various groups (races, religions, etc.) especially blacks (Zubrinsky & Bobo, 1996, Wilson & Hammer, 2001; Acevedo-Garcia & Lochner, 2003; Anderson et al., 2003; Leeuw et al., 2007; and Boustan, 2013) were the causes of residential segregation. Residential segregation is reported to also arise from historical and current government policies, income/socioeconomic differentials, and physical layout of the city (K' Akumu & Olima, 2007 and NPR Staff, 2012). According to Fry and Taylor (2012) residential segregation could arise as a result of local housing policies, zoning laws, real estate practices and migration trends. Religion and ethnicity were reported to be causes of residential segregation by Brimicombe (2007) and Edewor (2011). While Poole and Doherty (1996), Aliyu et al. (2012), Gambo and Omirin (2012), Dung-Gwom and Rikko (2009), and Uchendu (2010) attributed the cause residential segregation to religious intolerance. Summarising the several causes of residential segregation from past research efforts of scholars; Petrescu-prahova (2008) classified the causes into three main categories: physical characteristics of the urban environment, individual and aggregate socioeconomic characteristics, and individual preferences for neighbourhood composition.

Muhammad (2015) reported that residential segregation in the low density area of Bauchi in Nigeria is based upon the individual and aggregate socioeconomic characteristics of the people in the area, such as their income, family status, religion etc. This implies that the people in the low density area of the study area are characterised based upon their socioeconomic status and they are predominantly from the high income group, business and political class. In the medium density area individual and aggregate socioeconomic characteristics, individual taste/preference/choice of neighbourhood and political/institutional factors influenced residential segregation significantly. Meaning that residential segregation in the medium density area is influenced by the people's socioeconomic status and their tendency to sort across neighbourhoods for specific characteristics which best suit their needs such as accessibility, access to schools, affordable housing etc. and the political and institutional factors such as housing policies, sub-division regulation and zoning laws also influence their decision on which neighbourhood to reside in the study area. While in the high density area socioeconomic and individual taste/preference/choice of neighbourhood were the only factors that influence residential segregation in the area. Due to the socioeconomic status of the people in the high density area it implies that people in the area are predominantly from the low income group and thus the people sort for neighbourhoods which are commensurate to their socioeconomic status.

### **4. Residential Segregation and Housing Quality**

Residential segregation has been reported to affect the quality and availability of housing to the minorities. According to Bianchi, Farley and Spain (1982) two types of racial differentiation in the housing market can be identified in the US. In the first kind there is a high level of racial residential segregation in metropolitan areas where blacks are concentrated in central cities while the suburbs remain predominantly white. And the second kind of racial differentiation involves the type and quality of housing occupied by blacks and whites. Blacks typically live in lower quality housing than whites; they occupy older housing, and are less likely to own their own homes. They also reported that since families with high incomes are able to buy better housing than those with low incomes, much of the difference in housing quality and tenure might result from economic differences. In a similar report by Williams and Collins (2001), racial differences in neighbourhood quality persist at all levels of socioeconomic status (SES). Middle-class suburban African Americans reside in neighbourhoods that are less segregated than those of poor central city blacks. However, compared to their white counterparts, middle class blacks are more likely to live in poorer quality neighbourhoods with white neighbours who are less affluent than they are. According to reports by Darden (2001) and Dwyer (2007) advantaged groups typically occupy newer housing, often in far-flung suburbs, while older areas in central cities or inner ring suburbs are "left" to less advantaged class and racial groups, particularly blacks. A study in Flint, Michigan by Grady (2011) revealed that substandard and well-maintained housing were dispersed throughout the city of Flint, with a higher density

of substandard housing in areas of segregation and concentrated poverty.

Residential segregation can lead to large differences in neighbourhood quality. Oyebanji, Akintoye and Liyanage (2011) opined that residential segregation and deprivation are caused due to the differences in the quality of housing or housing inequality within urban neighbourhoods. According to Williams & Collins (2001), racial residential segregation has also led to unequal access for most blacks to a broad range of services provided by municipal authorities. Political leaders have been more likely to cut spending and services in poor neighbourhoods, in general, and African American neighbourhoods, in particular, than in more affluent areas. Poor people and members of minority groups are less active politically than their more economically and socially advantaged peers and elected officials are less likely to encounter vigorous opposition when services are reduced in the areas in which large numbers of poor people and non-whites live. This disinvestment of economic resources in these neighbourhoods has led to a decline in the urban infrastructure, physical environment, and quality of life in these communities (Williams & Collins, 2001).

Research in the U.S. has found that poor, segregated African American neighbourhoods are also characterized by high mobility, low occupancy rates, high levels of abandoned buildings and grounds, relatively larger numbers of commercial and industrial facilities, and inadequate municipal services and amenities, including police and fire protection. According to Oh (1995) segregated blacks are deprived of access to good jobs, basic social services such as good public schools, housing, and police protection, and municipal services such as garbage pickup and street cleaning, deprivations which significantly undermine the life chances and opportunities of blacks. In line with this, Ellen and Turner (1997) opined that the quality of the neighbourhood environment significantly affects the life choices of both children and adults.

Housing quality in Nigeria differs greatly within residential areas. The land subdivision laws of the Town and Country Planning Laws practiced in the country, which designate residential areas as high, medium and low density areas further exacerbate the poor housing conditions of the people in high density residential areas. In a similar report by Oyebanji et al. (2011), they asserted that in Nigeria, market has created class structure in terms of different qualities of housing environment – low, medium, high density areas for high, medium and low income earners respectively and government reservation area for top government officials and successful business people with varying housing standard and amenities based on demand and supply forces. Housing policies and programs have also been reported to fail in meeting the needs of the urban poor. As Nwaka (2005b) reported none of the housing programs advanced the housing conditions or needs of the poor in irregular settlements, but instead provided subsidized housing for middle-income groups, high-income people, and other well-connected individuals.

A study in Jos, Nigeria by Mallo and Anigbogu (2009) revealed that the inhabitants of the low-density neighbourhoods are predominantly people of high status; a mix of the high status people and peasants occupy the medium-density areas. The high-density areas on the other hand are characterised by poor facilities and infrastructure, and inhabited by mostly peasants. Edewor (2011) remarked that the high-density (low quality) residential areas in Nigerian cities have similar socio-economic and physical characteristics. These areas are poorly planned, overcrowded, occupied by low-income persons and the houses are built without reference to street networks. He noted that in the traditional indigenous cities, majority of the inhabitants of the low quality residential areas are indigenes of the urban areas.

The medium quality (medium density) residential areas are reported to be inhabited by middle-income persons and the streets are planned. They are not as overcrowded as the low quality residential areas and the density per hectare is relatively lower than in the latter. The ethnic composition is quite mixed, and in traditional town and cities that are growing less rapidly, the inhabitants comprise of young indigenes that have moved to the suburban areas because of the socio-economic and physical conditions in the pre-colonial residential districts (Edewor, 2011). The qualities of the low-density residential areas are higher than any other area. They are well planned and have a lower population. Similarly, Muhammad et al. (2015) reported that the housing quality in the high and medium density areas of Bauchi metropolis are relatively lower than that of the low density areas. Oyebanji et al. (2011) reported that the most direct effect of residential inequality/segregation is an inequality of neighbourhood amenities in terms of the conditions of surrounding houses, the availability of social networks, the amount of air pollution, the crime rate, and the quality of local schools.

According to Muhammad (2015) residential segregation had a significant effect on housing quality in Bauchi, Nigeria. Housing quality in the low density area had a very high relationship with the factors responsible for residential segregation and the area had the best houses and neighbourhood infrastructure. The impact of residential segregation is higher in the high density areas compared to the medium density areas of the study area. The housing quality is poorer in the high density areas as the area is predominantly inhabited by the low-income group, also the area lacked adequate infrastructure and basic amenities such as pipe-borne water, electricity supply, access roads, adequate waste disposal systems and drainages. The medium density areas also lack the basic infrastructural facilities and services however this area is not as overcrowded as the high density area.

## 5. Housing Quality Indicators

Housing quality is related to adequate housing as well as habitable housing (Jechoniah & Folasade, 2014). It embraces many factors including the physical condition of the building and other facilities and services that make living in a particular area conducive. The quality of housing within any neighbourhood should be such that satisfies minimum health standards and good living standard, but should also be affordable to all categories of households (Aribigbola, 2011; and Amao, 2012). Housing has to be qualitatively and quantitatively adequate in order to fulfil this basic purpose (Aderamo & Ayobolu, 2010). According to Coker et al. (2007) and Jiboye (2010), the quality of housing, being basically an important health element, affects the well-being of the occupants, their productivity, manner of living and the decencies of their lives. Significantly, good quality housing provides the foundation for stable communities and social inclusion. Aderamo and Ayobolu (2010) are of the opinion that the quality of a house and its environment is evident in the physical condition, landscaping, available facilities, and friendliness of neighbours, racial or economic composition or symbolic characteristics.

As the population in cities increased rapidly, division of labour increased and wealth became a major index of prestige in the large society (Aderamo & Ayobolu, 2010). Class boundaries became porous and new class developed as occupational differentiation increased, residential patterning followed the social changes and a form emerged with the advent of transport, which favoured the well to do. The upper class broke the workplace – residence tie and moved away from the ever more congested city centre to a more conducive and exclusive environment. In this spatial pattern, the elite group resides in the exclusive and reserved part of the city, the middle class occupy the former homes of the elite and the poor make do with buildings in the interior, usually make shift, slums and squatter settlements. This situation is characteristic of most cities of the third world and of course Nigerian cities. Urban areas are usually associated with housing problems. According to Mabogunje, Hardoy and Misra (1978) these problems are poor housing conditions manifested by overcrowding and inadequate dwelling units; high densities resulting from uncontrolled operations of the land market; inadequate supply of public services and infrastructural services; pollution of water and solid waste problems; increasing deterioration of the natural landscape; air and noise pollution.

Scholarly works on housing quality revealed the commonly used indicators of housing quality to include structural adequacy, neighbourhood quality, residents' perception of neighbourhood safety, level of public services provided, access to work and other amenities, room density and housing affordability (Aribigbola, 2011). While Onibokun (1990) cited in Jechoniah & Folasade (2014) stipulated that the determinants of housing condition in Nigeria are the age of the dwelling, the types of buildings and the materials used in their construction, the varieties and adequacy of facilities provided in dwellings and the modes of handling various aspects of housing construction such as site preparation, laying of foundation, construction of walls and roofing. Jiboye (2010) and Lanrewaju (2012) on the other hand reported that the four major criteria used in assessing housing quality were beauty, convenience, health and accessibility. The variables considered under these criteria include; aesthetics, ornamentation, sanitation, drainage, age of building, access to basic housing facilities, burglary, spatial adequacy, noise level within neighbourhood, sewage and waste disposal, air pollution and ease of movement among others. Five major factors were reported by Aderamo and Ayobolu (2010) to describe housing quality which are internal facilities; major materials for roofing and materials for external walls; the type of toilet and bathroom facilities available; the source of lighting in the house when centrally provided electricity is not available.

Lanrewaju (2012) citing Neilson (2004) stipulated five basic criteria that should be adhered to ensure housing quality, these are, that the house must be in compliance with tolerable standard, free from serious disrepair, energy efficient, provided with modern facilities and services, and that it must be healthy, safe and secure. These indicators according to Lanrewaju consist of variables such as; access to basic housing and community facilities, the quality of infrastructural amenities, spatial adequacy and quality of design, fixtures and fittings, building layout and landscaping, noise and pollution control as well as security. Similarly, Muhammad et al. (2015) and Muhammad (2015) reported that the criteria which determines housing quality in Bauchi metropolis are building design, roofing materials, wall materials, condition of buildings, age of the buildings, internal and external facilities, toilet and bathroom facilities, and the source of lighting.

## 6. Framework for the Existing Patterns of Residential Segregation and Housing Quality in Nigeria

The findings from the research were used to develop a framework (Figure 1) for residential segregation and housing quality in the study area. In the framework it shows the link between the factors responsible for residential segregation and the patterns of residential segregation in the three density areas, and housing quality in the study area. The framework shows that there is a significant relationship between residential segregation the factors responsible for residential segregation in Bauchi metropolis. And also that there is a highly significant relationship between housing quality and residential segregation in the study area. The framework was developed to provide knowledge on residential segregation and its relationship to housing quality in the study area. The framework was developed to also serve as a guide for future research on residential segregation and

housing quality.

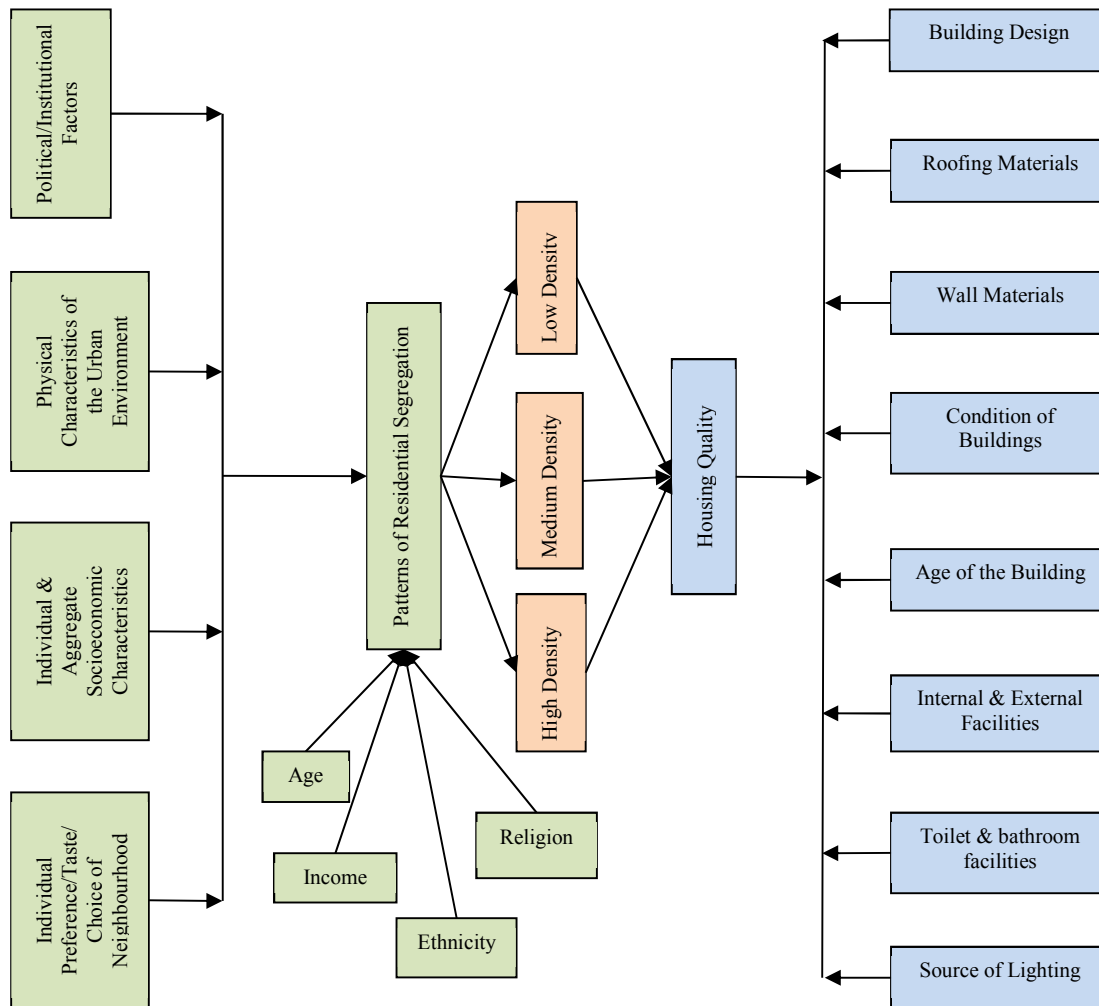


Figure 1: Framework for Residential Segregation and Housing Quality in Nigeria

## 7. Conclusion

Based on the review of existing literature the study revealed that the patterns of residential segregation within the three density areas of the study area are based mainly on religion, ethnicity, income and age; and the factors responsible for residential segregation in the study area have been identified as mainly individual and aggregate socioeconomic characteristics, individual preference/taste/choice of neighbourhood and political/institutional factors. While housing quality in the study area has been revealed to be based on building design, type of roofing materials and wall materials, condition of buildings, age of buildings, the type of internal facilities, type of toilet and bathroom facilities and the source of lighting in the absence of electricity from the mains supply. The framework developed revealed that there is a relationship between residential segregation and the factors responsible for residential segregation in Bauchi metropolis, and also a relationship between housing quality and residential segregation in the study area.

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