Article

Factors that influence choice of residence by urban informal settlement dwellers in an intermediate city: A case study of Enugu, Nigeria

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Abstract: The consequences of urbanization in Sub-Saharan Africa are poverty, insecurity, and the growth of informal settlements. These settlements are characterized by overcrowding, tenure insecurity, a lack of basic services and amenities, and many other deprivations. The current study looks at the social and environmental problems faced by residents and the factors responsible for their choice to reside in an informal settlement in Enugu using the survey research method. Primary and secondary data were utilized in the study. Whereas the former source includes a structured questionnaire and observations, the latter source comprises relevant literature. A total of 111 questionnaires were distributed to household heads in five selected informal settlements in Enugu. The data set was collated and analysed using descriptive and inferential statistics. Principal component analysis was used to classify and determine the factors influencing the choice to reside in an informal settlement. The study revealed that six factors influence the choice of residence in informal settlements: government/political influence, social integration/services, housing/employment, infrastructure accessibility, livelihood costs and security/economy. The factors accounted for 72.11 percent of the factors influencing the choice to reside in an informal settlement. The major social challenges faced by residents are gambling, drug abuse, and overcrowding. The study recommends that low-cost housing that is affordable should be provided for the low-income group that characterizes informal settlements in Enugu metropolis.

Keywords: informal settlement; residence decision; poverty; social challenges; residential location

1. Introduction

By 2018, more than half of the world's population lived in urban areas. This population is expected to increase to 68% by the year 2050. The increase in urban population has led to the urbanization of poverty, inequality, and the growth of informal settlements [1]. The poor are the major inhabitants of informal settlements in the city and live with many deprivations and bear the greater burdens of urban environmental risks because of the situation in which they are forced to live [2]. The urban poor are faced with daily challenges that include limited access to employment opportunities and income, inadequate and insecure housing and services, violent and unhealthy environments, little or no informal social support system, and limited access to adequate health and education opportunities [3,4]. This condition refers to a dynamic condition of vulnerability or susceptibility to risks. The situation is even more worrisome in the developing countries of South-Asia and Sub-Saharan Africa, where poverty reduction has been uneven as these countries lagged behind in achieving the Millennium Development Goal [5,6].

Informal settlements are known by a number of different names, some of which are slums, low-income settlements, semi-permanent settlements, shanty towns, spontaneous settlements, unauthorized settlements, unplanned settlements, uncontrolled settlements, etcetera. Most of the urban poor populations in developing countries live in informal settlements [7–9]. In Africa, almost two-thirds of the urban population resides in informal settlements [10]. Sub-Saharan Africa is reported to have the largest proportion of urban slum dwellers, at about 71.9% [11]. Reasons have been given as the cause of informal settlement development and growth in different parts of the world [4,7,12–14]. The formation of slums has been blamed on discriminatory urban regulations and public spending that fail to deal with housing problems of the poor [4,15,16]. Therefore, the proliferation of informal settlements in urban areas can be said to be an inevitable consequence of the lack of regional planning, rapid urbanization, and high cost of housing [14,17]. Informal settlements provide a convenient place for migrants seeking economic opportunities in major cities [7]. They develop makeshift houses in and around the cities where there are vacant and unclaimed parcels of land [14].

Enugu, an intermediate city located in the hinterland of Nigeria, has twenty-three informal settlements. These settlements are characterized by most of the problems discussed above about slum areas in developing countries (social, economic, environmental, and, in some cases, physical problems). Despite the situations in the slum areas highlighted above, many people still make the decision to live in informal settlements in Enugu. This paper raises the question of why individuals make the decision to reside in informal settlements. This research is aimed at ascertaining the social and environmental challenges faced by residents and determining the factors that influence their choice of residence in informal settlements in Enugu metropolis, southeast Nigeria.

2. Theories of residential location

There are many classical theories of residential location: The utility maximization theory, for example, the studies of Alonso [18]. This theory suggests that people will seek to minimize commuting costs by selecting a house location that provides greater accessibility to their workplace. Hoang and Wakely [19] and John et al. [20] criticized and modified the theory. Robert Park [21] and his associates advanced the Human Ecology Theory, which looks at how people and communities interact with their immediate physical and social environments, including where they choose to live. The dynamic nature of urban settings and the impact of social and environmental influences on human behavior are highlighted by human ecology theory. A contributor to Human Ecology Theory is the concentric zone model by Burgess, which imagines cities as a series of concentric rings extending outward [22]. The second concentric zone is made up of mostly older homes and tenement houses. This area is often characterized by poverty, ill-kept properties, and slum or near-slum conditions [23]. Others that have expanded this theory are Wirth [24], Hawley [25], and Özerdem [26]. This theory was also used in analyzing residential location choices and the influence of social and economic factors in Beijing, China [27].

Again, the Rational Choice Theory is a theoretical framework that seeks to

explain human decision-making by assuming individuals act in a rational and self-interested manner. This theory has been used to analyse decisions about where to live, taking into account variables such as housing costs, amenities, proximity to jobs, and bounded rationality. In the same vein, social network theory provides a theoretical framework for understanding how social relationships and networks influence individuals' behaviours, decisions, and choices. The influence of social networks on residential location choices is evident in the argument that individuals tend to associate with others who are similar to themselves in terms of various characteristics, such as socioeconomic status, ethnicity, or lifestyle preferences [28]. The role of social networks in providing emotional and instrumental support to individuals was highlighted in the context of residential location choices, where individuals considered the availability of social support networks, such as family or close friends, when deciding where to live [29].

The Push-Pull Theory posits that individuals make decisions regarding residential location based on a combination of push and pull factors, originally developed in the context of migration studies. In the context of informal settlements, push factors refer to the negative conditions or circumstances in individuals' current residential areas that drive them to seek alternative housing options. For example, individuals may be pushed away from their current location due to poor living conditions and a lack of access to essential services [3]. On the other hand, pull factors are the positive attributes or opportunities that informal settlements offer, which attract individuals to choose these locations as their residential areas. The push-pull theory recognizes that both push and pull factors operate simultaneously and interact to shape individuals' decision-making processes.

3. Literature review

Several studies have been carried out to determine the factors that influence household choice of residence in different parts of the world. Many studies focused on central cities, large metropolises, and suburban areas. Studies have been carried out on the social, economic, physical, environmental, infrastructure, and religious attributes of location decisions. A study carried out to determine the most influencing factors of residential location preferences used nine factors that people consider while making a choice for a residential location [30]. These factors are: distance from work place; cost of building or land; distance from city centre/market; community preferences; distance from school; availability of recreational facilities; water supply and transportation; security; development trend; and surrounding environment. The analysis revealed that workplace location is the most governing criterion in deciding residential location from the majority of urban dweller's perspectives [30].

Studies have looked at the various geographical and economic factors of residential location choice. One of such studies found household income, race, household size, number of vehicles in the household, type of housing, and household structure to be the most influencing factors [31]. In addition, distance to work, distance to shopping destination, availability of social facilities, security, cultural attachment, income, access to employment opportunities, and ratio of housing cost to income were also found to influence residential location choice [32,33].In the same vein, when the

environmental factors were examined, it was found that physical/environment factors, facilities and amenities, security factors, and community/socio-economic factors influence the choice of residential neighborhood to a reasonable extent [34]. The study also noted that each family chooses from the housing available at any given time to maximize their utility, but the factors that affect the complex selection process are unknown [34]. In assessing the social factors that influence residential area preference, 11 variables were used. Then factor analysis was used to extract two components: socio-demographic and urban infrastructural factors, from these 11 variables. The study concluded that these two factors influence residential area preference [35]. Also, other studies examined various factors associated with housing choice and found that socio-economic factors and the ease of commuting within the metropolis are the key factors [36,37]. Another study on the role played by different housing attributes in residential choice preference used fourteen variables. These fourteen variables were reduced to two components: dwelling and accessibility attributes as influencing factors [38]. Ease of transport and availability of transportation facilities, services, and amenities have also been found by studies to influence household choice of residential location [39,40]. These studies found proximity to health centres, low pollution levels, and access to public transportation and taxi stations as influencing location choice. This is to say that residents strive to minimize commuting cost and maximize home-based non-commuting time [40].

The push-pull theory has been used to analyse the dynamics of residential location choices. In South African informal settlements, push factors such as limited access to services, crime, and poor infrastructure were identified alongside pull factors such as improved housing options, social networks, and proximity to economic opportunities [41]. Similarly, the relationship between socioeconomic status and the factors considered in making residential location decisions in Port Harcourt metropolis, Nigeria, was examined using push and pull factors. The study found home ownership, crime/security, an increase in income, rent and availability of infrastructure, and proximity to industrial land uses to be among the eleven important push factors, while security, income, home ownership, electricity, water, affordable rent, size of dwelling, and social status are among the prominent pull factors [42]. Again, house price, housing environment, housing location, accessibility, and transportation services were found as push factors [37].

In studying environmental attributes considered in residential location decisions along coastlines, the physical and environmental factors of residential location decisions were used. The result showed that out of the 15 variables examined, environmental attributes contributed 39.78% of the over 70.76% of the factor loadings. The environmental attributes considered by households in residential decisions are neighborhood, critical dwelling, and socio-economic attributes [43]. Similarly, a study that assessed environmental influence found preference for places near urban parks than nearness to work [44]. A study based on the discrete choice model found that there exists a complex household sorting pattern that is initiated by sociocultural, socioeconomic, accessibility, and neighbourhood composition because African households tend to develop strong ties to their origins [45]. Another study found that stakeholders' relations have direct and positive influence on residential choice [46]. Race was also confirmed as a very influential factor [31]. Also, religious and cultural

factors were found to be influential in terms of residential location preferences in Iskandar Malaysia [47].

A few studies have been carried out on why households choose to live in informal settlements. One of such studies was carried out on factors that urban residents of informal settlements consider in location choice in Dar es Salaam, Tanzania. The study argues that with income limitations, the urban poor rely on other non-economic resources to enable their residential location decisions. The result of the study showed that 1) proximity and access to livelihood opportunities; 2) proximity to relatives and/or friends and familiarity with the area; and 3) convenience in terms of low living costs, cheap rental rooms, and access to vacant land are the most prominent factors influencing location decision-making. The study suggested that the urban planning process should aim towards empowering and capitalizing on social capital and close-knit networks of marginalized urban citizens [48]. Also, in trying to bridge the gap in literature on the residential location choice of informal settlement dwellers, the case study approach was used to investigate factors that inform households' decisions to live in Kumasi's peri-urban settlements, based on households' likelihood of changing residences in the future and their stated residential location preferences. The study found that family relations, relatively low land prices and house rents, as well as work-place proximity, were the most significant reasons underpinning households' choice of the peri-urban settlements [49]. In Nigeria, the movement pattern of slum dwellers, factors influencing their residential choices, and reasons for the people to remain in Lagos were investigated. The findings of this study showed that migration to Lagos was the major reason for population growth and, hence, slum development. It was also found that slums in Lagos serve as a sinkhole and a final destination for slum dwellers [50]. Another study looked at residential location choice among informal settlers in Port Harcourt, Nigeria, using thirteen factors. It found that seven factors—living close to family or friends, low rent/cost of housing, livelihood opportunities, commuting cost, proximity to work, nearness to children's school, and personal reasons—were the main determinants [51].

From the literature reviewed, many variables influence the choice of residence in urban areas. Twenty-three variables were identified from the literature reviewed that influence choice of residence. These variables are used in determining the residential location choice of informal settlement residents in Enugu. Most of the existing studies used a few variables to determine residential choice. It is also apparent that there is a dearth of studies on factors that determine the choice of residence in informal settlements in Nigeria, especially in the intermediate cities of the hinterland. Most of the existing studies focused on residential location choice in formal and planned residential areas. This gap in the literature provides the ground for this study. Therefore, the specific objectives of this study are to (1) ascertain the social and environmental challenges faced by residents in the informal settlements and (2) determine the factors influencing the choice of residence in these informal settlements.

4. The case study city

The city of Enugu is located approximately between latitude 06°21 and 06°30 north of the equator and longitude 07°26 and 07°37 east of Greenwich meridian. It

covers an approximate area of 200 km^2 and is situated on an elevation of 254 m above sea level. Enugu City was founded in 1909 by a British as a result of the discovery of coal in the Udi escarpment. Enugu is the capital city of Enugu State, located in the hinterland of Nigeria (see **Figures 1** and **2**). It has a population of over one million inhabitants. Enugu is made up of three local government areas. It has thirty-two planned residential layouts. It has remained an administrative headquarters since 1929. It has six tertiary institutions and is a commercial and industrial centre.
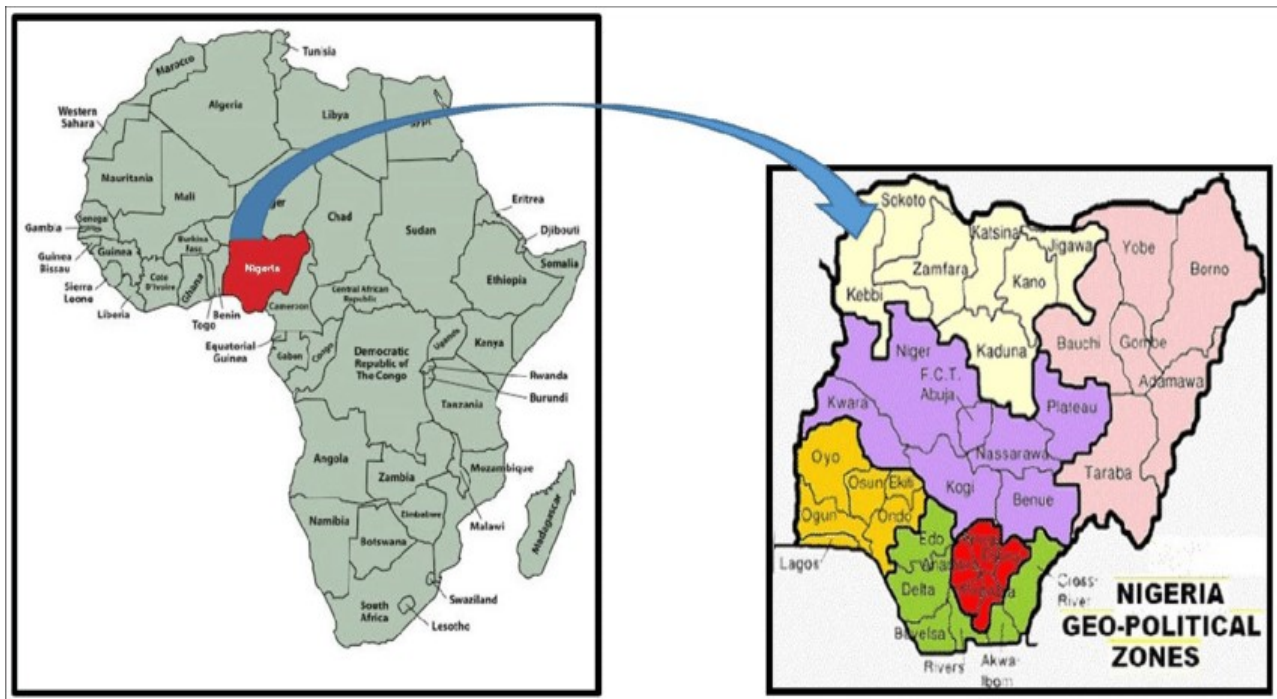
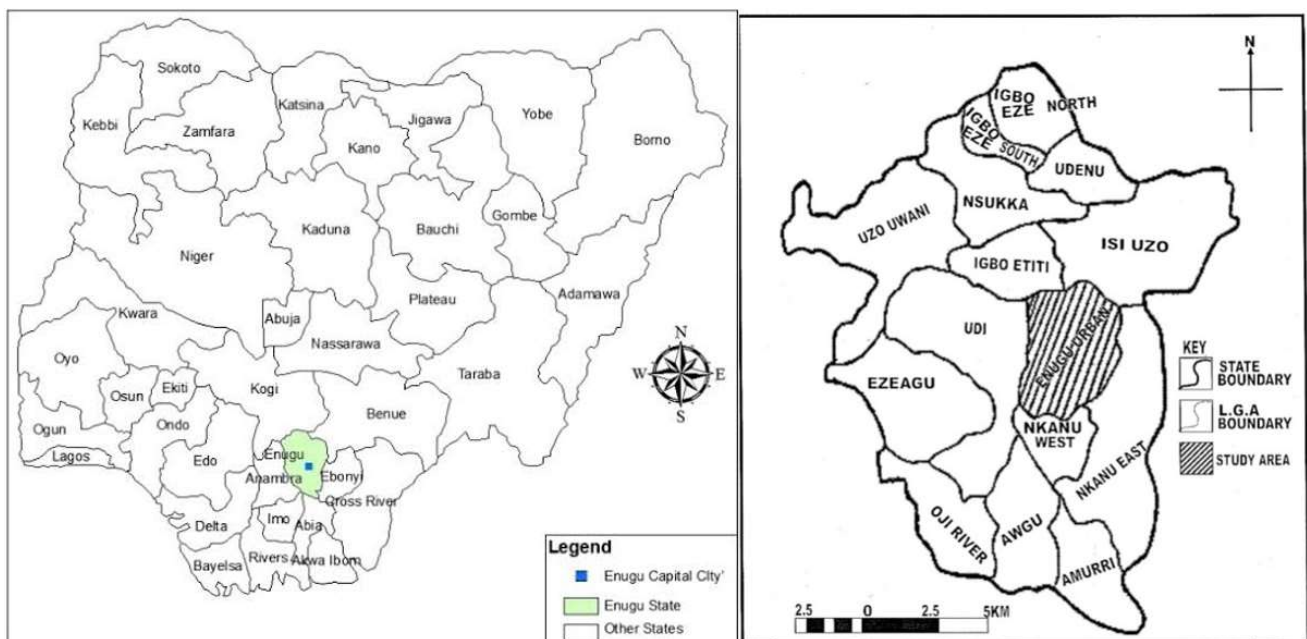

Figure 1. Map of Africa showing Nigeria [52].

Figure 2. Map of Nigeria showing Enugu state and map of Enugu state showing Enugu metropolis [52].

Informal settlements sprung up within or around planned residential layouts. Enugu has about 23 informal settlements located within the metropolis (URP 581). Four of the settlements are located in Enugu North Local Government Area (LGA), three in Enugu South, and sixteen in Enugu East LGA. Many people in Enugu live in these informal settlements. They primarily engage in unskilled labour, artisan work, and unofficial economic activities like hawking, street trade, etcetera. Very few of the residents are civil servants. Due to a lack of continuous upkeep of the buildings, streets, and drainage systems, deterioration has occurred [23].

5. Materials and method

The research was carried out using the survey method. Both primary and secondary data were utilized in the research. Primary data were collected with the aid of a structured questionnaire, which contained two sections. Five informal settlements were randomly selected from the existing 23 informal settlements. One settlement from Enugu South, 2 from Enugu East, and, also, two from Enugu North LGAs. This was done to capture informal settlement(s) from each of the three local government areas that make up Enugu Metropolis. The selected settlements are Onuato, Ugbowa, Ugbo-Odogwu, Ngenevu, and Ikirike (see **Figure 3**).

Figure 3. Map of Enugu metropolis showing location of informal settlements [53].
Note: modified by researcher.

A total of 111 questionnaires were distributed to heads of households in the selected settlements. Questionnaire distribution was according to the population of the settlement. Onuato 24, Ugbowa 21, Ugbo-Odogwu 25, Ngenevu 22, and Ikiriki 19 questionnaires. Simple random sampling was used to select households to be sampled

(each household head had an equal chance of being selected).

The data collected through the questionnaire centered on household choice of residential location and social and environmental challenges faced by informal settlement residents. Statistical Package for Social Sciences (SPSS) was used to analyse the data. A five-point Likert scale was used to determine the importance of the factors that influence choice of residential location. Principal component analysis (PCA) was used to identify and classify the determinants of residential location choice in informal settlements in Enugu. PCA is a statistical technique that converts a set of observations of possibly correlated variables into a set of values of linearly uncorrelated variables called principal components using an orthogonal transformation. It classified the 22 likely determinants of residential location choice into components based on their factor loading. PCA is expressed mathematically as:

$$F = \sum W_j X_j = W_1 X_1 + W_2 X_2 + \ldots + W_n X_n$$

where

$$W_1 - W_n = \text{factor weights}; X_1 - X_n = \text{original variable}.$$

6. Results

6.1. Environmental and social challenges of residents in informal settlements in Enugu

From the observations made by the researchers, informal settlements in Enugu are besieged with most of the environmental challenges associated with slum settlements in other African and Nigerian cities. Poor house quality, waste disposal and drainage problems, poor access roads, etcetera [4,7,15,17]. These challenges were obvious even from observations. See **Figures 4** and **5**.

Figure 4. Building and road condition in Ugbo-owa.

Figure 5. Waste water from residence flowing on to the street at Ikirike and Onu-Asato.

The respondents were asked the most pressing social challenges in their settlement. Their response is shown in **Table 1**. Gambling is the highest social challenge with 34.1%, followed by drug abuse 29%, overcrowding 21.2%. While insecurity and prostitution have the lowest percentages of 9.8% and 5.9%, respectively (see **Table 1**). This suggests that the major social challenges facing residents of informal settlements are gambling, drug abuse, and overcrowding, whereas insecurity has been controlled through the use of local vigilante groups and neighborhood watch. The issue of security was confirmed during the researcher's field survey.

Table 1. Social challenges of informal settlements in Enugu.

Social challenges	% response
Insecurity	9.8
Overcrowding	21.2
Drug abuse	29.0
Prostitution	5.9
Gambling	34.1

6.2. Factors influencing choice of residence in informal settlement

Having understood the social and environmental problems of informal settlements in Enugu, respondents were asked why they chose to live in an informal settlement. Their responses are shown in **Table 2** below. The descriptive statistics of 23 variables influencing residential location choice are shown in **Table 2**. The mean scores were used to rank the variables, with an average mean score (MS) of 2.691. The result suggests that 12 variables strongly influence household choice of residence in informal settlements in Enugu metropolis. They are in descending order: cost of living (4.42), cost of housing and land tenure (4.40), income (4.24), poverty (4.14), security and safety (4.05), employment opportunities and livelihood (3.57), business interest (3.11), family ties (3.00), proximity to work, city centre and transportation (2.91), access to basic infrastructure (water, sanitation, and electricity) (2.79), social cohesion and ethnicity (2.65), accessibility to social amenities and services (2.62).

Table 2. Factors that influence choice of residence in informal settlements in Enugu city.

Variables	Mean values	Rank
Cost of living	4.42	1
Cost of housing and land tenure	4.40	2
Income and affordability	4.24	3
Poverty	4.14	4
Security and safety	4.05	5
Employment opportunities and livelihood	3.57	6
Business interest	3.11	7
Family ties	3.00	8
Proximity to work, city centre and transportation	2.91	9
Access to basic infrastructure (water, sanitation, electricity)	2.79	10

Table 2. (*Continued*).

Variables	Mean values	Rank
Social cohesion and ethnic/religious communities	2.65	11
Accessibility to social amenities and services	2.62	12
Environmental hazards and risks	1.87	13
Land use policies and urban planning	1.81	14
Current political situation of the country	1.81	14
Government interventions and regulations	1.78	16
Inconsistency in land and plan legislation	1.77	17
Rigid building regulation for informal houses	1.76	18
Inadequate housing policy	1.68	19
Corruption in relation to land	1.67	20
Inefficient public administration and procedure provision by the leaders	1.59	21
Problem of legal land provision	1.57	22
Average mean score	2.691	-

However, the most influential ones are cost of living, cost of housing and land tenure, income, poverty, safety, and security, all having MS ≥ 4.0. This is in agreement with other works on factors influencing the choice of residence in slums [42,50]. Also, employment opportunities and livelihood, business interest, and family ties are the second most influential factors in this study but are ranked first in [51]. Proximity to work, city centre and transportation, access to basic infrastructure, social cohesion and ethnicity, and accessibility to social amenities and services were ranked (9th, 10th, 11th, and 12th). This is also in variance with the study that found proximity to city centre the most influential factor in Ilorin [32], but in agreement with [39,40,36,37]

Ten variables got an MS of (<2.0). This implies that these 10 variables do not have a significant influence on the choice of residence in the study area.

6.3. Determinants of choice of residence

The results of the PCA analysis classified the identified variables that influence the choice of residence in informal settlements into six components. Component 1 loaded significantly on 10 variables as distinct from other variables that determine choice of residence. These are rigid regulation for informal settlement houses (0.931), corruption in relation to land (0.895), inefficient public administration and procedure provision by the leaders (0.892), inconsistency in land and plan legislation (0.885), inadequate housing policy (0.881), the current political situation of the country (0.880), the problem of legal land provision (0.864), land use policies and urban planning (0.837), government interventions and regulations (0.680), and environmental hazards and risks (0.526). It has an eigenvalue of 7.495 and explains 34.066% of the determining variables of residential location choice in informal settlements in Enugu. Component 1 is an index for government/political influence on the choice of residence in informal settlements. The defining variable is rigid regulation for informal settlement houses.

Component two loaded significantly on four variables. They are social cohesion and ethnic communities (0.836), accessibility to social amenities and services (0.782),

business interest (0.680), and family ties (0.493). The component has an eigenvalue of 2.492, explains 11.327% of the determining variables, and is therefore classified as one of the factors influencing the choice of residential location in informal settlements. Component two is an index for social integration/services influencing choice of residence in informal settlements in Enugu. The defining variables of the component are social cohesion and ethnic/religious.

Component 3 is significant and loaded on two factors as distinct from other determinants of residential location choice in informal settlements in Enugu. These are the costs of housing and land (0.795) and employment opportunities and livelihood (0.708). The component has an eigenvalue of 2.066 and explains 9.390% of the variability of choice of residential location. It is therefore classified as one of the factors influencing choice of residential location in informal settlements. Component three is an index for housing/employment influence on choice of residence in informal settlements in Enugu. The defining variable of the component is the cost of housing and land.

Component 4 is significantly loaded on two variables. They are proximity to work, city centre and transportation (0.858) and access to basic infrastructure (water, sanitation, and electricity) (0.845). This component has an eigenvalue of 1.530 and explains 6.955% of the variability. It is therefore one of the factors influencing the choice of residential location in informal settlements. Component 4 is an index for the influence of infrastructure/accessibility on the choice of residence in informal settlements in Enugu. The defining variable of the component is proximity to work, city centre and transportation (0.858).

Component 5 is significant and loaded on two variables. They are cost of living (0.742) and poverty (0.730). It has an eigenvalue of 1.205 and explains 5.479% of the variability in determining the choice of residential location. Component 5 is an index for livelihood cost influencing choice of residence in informal settlements in Enugu. The defining variable of the component is the cost of living (0.742).

Component six is significant and loaded on two variables. They are security and safety (0.613) and income and affordability (0.607). It has an eigenvalue of 1.009, explains 4.993% of the determining variables, and is therefore classified as one of the factors influencing the choice of residential location in informal settlements. The component is an index for security/economy influencing choice of residence in informal settlements in Enugu. The defining variable is security and safety (0.613). In all, the six identified determinants that influence choice of residence in informal settlements in Enugu are government/political, social integration/services, housing/employment, infrastructure/accessibility, livelihood cost, and security/economy. They accounted for 72.211 percent of the determinants of residential location choice in informal settlements (see **Table 3**).

Table 3. Determinants of choice of residence in informal settlements in Enugu.

Component	Determinants	Factor	Eigen value (% variance)	Loading
1) Government/Political	rigid building regulation for informal houses	0.931	7.495	34.066
	Corruption in relation to land	0.895		
	Inefficient public administration and procedure provision by the leaders	0.892		
	Inconsistency in land and plan legislation	0.885		
	Inadequate housing policy	0.881		
2) Social integration/Services	Social cohesion and ethnic communities	0.836	2.492	11.327
	Accessibility to social amenities and services	0.782		
	Business interest	0.680		
	Family ties	0.493		
3) Housing/Employment	Cost of housing and land tenure	0.795	2.066	9.390
	Employment opportunities and livelihood	0.708		
4) Infrastructure Accessibility	Proximity to work, city centre and transportation	0.858	1.530	6.955
	Access to basic infrastructure (Water, electricity, sanitation)	0.845		
5) Livelihood costs	Cost of living	0.742	1.205	5.479
	Poverty	0.730		
6) Security/economy	Security and safety	−0.613	1.009	4.993
	Income and affordability	0.607		
Total				72.211

Source: Result of principal component analysis using Statistical Package for Social Sciences.

7. Discussion

Principal component analysis was used to compress the variables into six components, and each component influences the choice of residence in informal settlements.

Government/political influence have total eigenvalues of 7.495 and 10 factors, explaining 34.066% of the determining variables. It consists of rigid building regulations for informal houses, corruption in relation to land, inefficient public administration and procedure provision by the leaders, inconsistency in land and plan legislation, inadequate housing policy, the current political situation of the country, problems of legal land provision, land use policies, and urban planning, government interventions and regulations, and environmental hazards and risks.

The variables that make up this component according to how they influence the people's choice ranked between 13 and 22 (see **Table 2** above). This suggests that this component, although it has the highest factor loading due to the high correlation of its variables, is the least influencing component affecting choice of residence in informal settlements in Enugu metropolis. Hence, it agrees with the claim that these factors are the push factors which chase people away from the formal areas [7,15].

Social integration/services have eigenvalues of 2.492 and consist of 4 factors. It explains 11.327% of the determining variables and is therefore one of the factors influencing choice of residential location in informal settlements. It comprises of social cohesion and ethnic communities which implies that some people choose to live

in informal settlement because of the presence of a member of their ethnic group or religion. The majority (91%) of the respondents are immigrants from neighbouring villages and towns. This finding is in agreement with works that opined that social ties, religion, stakeholder's relations, race, and culture, as well as social connection and prestige, are important factors that influence choice of residential location [28,29,31,34,44,47,49,51,46]. Accessibility to social amenities and services is the second variable under this component. Some of these informal settlements are close to some social amenities, such as health centre, private and public primary and secondary schools. However, some of these social amenities are not functioning effectively and are not enough to service the population. This is in agreement with works that found informal settlements to be characterized by a lack of critical social amenities, bad housing facilities, and an unsafe environment [7,15]. Business interest is another factor. From the questionnaire and interview, it was found that the majority of the respondents are petty traders. Many of them have their businesses within the settlement, and that contributes to the reason for either choosing or retaining their respective settlements. Implying that people will continue to stay in slums as long as their needs are met [50]. Family ties is another important factor supporting that living close to family and friends is a factor affecting choice of residence in informal settlement [31,46,48,49,51]. The factor social integration/services is in agreement with the Rational Choice theory, which posits that housing costs, amenities, proximity to jobs, and bounded rationality influence residential location choice, and also with the social network theory, which says that individuals tend to associate with others who are similar to themselves [28,29].

Housing/employment has an eigenvalue of 2.066 with 2 factors. It explains 9.390% of the determining variable and is one of the factors influencing choice of residence in informal settlements in Enugu metropolis. One of the factors is the cost of land. Some of the respondents secured land and erected structures due to the low cost of land in the informal settlement. This supports the findings that many of the people who have lived long in slums are the owners of their houses [50]. Employment opportunities and livelihood are another factor. Some of the dwellers have employment opportunities and sources of livelihood in and around the informal settlements. This factor agrees with the Human Ecology Theory, which looks at how people and communities interact with their immediate physical and social environments, and also the Rational Choice Theory.

Infrastructure accessibility has eigenvalues of 1.530 with 2 factors. It explains 6.955% of the determining variables and therefore influences choice of residence in informal settlements in Enugu metropolis. They are: proximity to work, city centre and transportation. These have been found as influencing factors [30,49,50]. Access to basic infrastructure (water, sanitation, electricity) in the survey of the five informal settlements was found to be poor. Lack of potable water (a problem peculiar to the entire city) and very poor sanitation abound. The availability of electricity in the informal settlements is a parameter for choosing a settlement [42]. This factor is in agreement with the Utility Maximization Theory, which suggests that people will seek to minimize commuting costs by selecting a house location that provides greater accessibility to their workplace [40] and the Rational Choice Theory.

Livelihood cost factors have eigenvalues of 1.205 and 2 factors. It explains

6.955% of determining variables, and it is one of the factors influencing choice of residence in informal settlements in Enugu metropolis. It has cost of living as a factor. Lower cost of living in informal settlements is a pull factor, and high cost of living is a push factor from the formal areas. Poverty is a critical factor that influences the choice of residence in informal settlements [42]. This component is in line with the Push and Pull theory of residential location, which states that there are factors that either push or pull residents to a place.

Security and economy have an eigenvalue of 1.099 and 2 factors; it represents 4.993% of determining variables, and it is classified therefore as one of the factors that determine the choice of residence in informal settlements in Enugu metropolis. It comprises of the following variables: security and safety, and income and affordability. It was found that there is security and safety in informal settlements in Enugu, as against the general assumption that informal settlements are unsafe places. This is in agreement with the findings that security/safety is the most influencing factor in choice of residential location in Ibadan, Nigeria [36]. This means that residents will always make housing choices in areas they feel are safe.

8. Conclusion

The study determined the factors that influence choice of residence in informal settlements in Enugu metropolis. The data used was based on responses from residents of 5 informal settlements in Enugu. The results show that the determinant factors of choice of residence in informal settlements consist of the following: government/political influence, social integration/services, housing/employment, infrastructure accessibility, security/economy, and livelihood cost. The implication is that policymakers should bear these influencing factors when improving /upgrading informal settlements. It was also found that gambling and drug abuse are the major social challenges in informal settlements in Enugu. Low-cost housing that is affordable should be provided for the low-income group that characterizes informal settlements in Enugu metropolis. Informal settlements should not be allowed to continue to deteriorate. Policy that will not only improve the quality of the environment where people live should be formulated. This should also include the welfare, wellbeing, and psychological wellness of the residents.

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