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Evaluation of Rental Housing Preferences of Urban Consumers in Cross River State, Nigeria

INAH, SYLVESTER ABAM
HND, PGD, M.SC, MSC PH.D
Email: sylvesterinah@unicross.edu.ng

Department of Urban and Regional Planning, University of Cross River State, PMB 1123 Calabar, Nigeria

ABSTRACT

Housing is ranked second after food in the daily physiological need of mankind. Despite this fact, housing development for human accommodation has continued to pose huge challenges which is not only limited to individuals but also to governments of all nations of the world. In addressing this problem, the Nigerian Government initiated and implemented various housing policies in the past to address this colossal problem varying from adequacy, affordability to quality. Thus, this article evaluates the various economic and environmental preferences urban housing consumers consider before deciding for a rental location. This study categorizes rental housing preferences of consumers into two tenure status. The survey approach was adopted and questionnaires as instruments for data collection was used. A total of 276 questionnaires was administered to household heads using stratified sampling technique; out of which 226 (82%) was recovered. The data were analyzed using descriptive and inferential statistics. The result showed that different variances exist between tenement subgroups consumers amongst the 36 attributes used as variables for the study. The results also revealed that urban housing consumers exhibits low level of housing preferences linked with environmental blight and poor infrastructural deficiencies observable in most houses rented by consumers. The study advocates for an inclusive housing policy review which incorporates citizens participation and decentralization of policy formulation and implementation at the grassroot level and further align with principles of sustainable housing development.

Keywords: Rental housing preference, Tenure status, Households, Relative preference index, Quality variables.

1. Introduction

Housing is a fundamental need to human beings that is ranked second to food in the daily physiological needs of mankind. Thus, housing is a commodity of essence that is in high demand whether in urban or rural areas, irrespective of tribes, culture or religion. Accessibility to housing remains an important indicator in the survival of humans and also regarded as a fundamental human right (Eteng, Mfon and Okoi, 2022; UN Habitat, 2006). Residential housing preferences and choice making in Nigeria, particularly in Cross River State is a trending subject of public discourse with regards to quality and affordability. It is believed that there are critical desires that make it possible for human beings to settle on a preferred choice for a given production (Taiwo, Yusoff and Aziz, 2018). Available facts on residential housing choices by past researchers noted the clarifying conventions in household residential housing preferences to include socio-economic attributes such as wages, age, family unit and the prevailing housing condition (Zinas and Jusan, 2023).

Generally, developers of commercial housing hardly take a wholistic consideration of residential housing satisfaction requirements of housing consumers especially the urban poor in Nigeria, as often developers in the building industry are of the impression that any type of housing will do because housing consumers have no choice but just needs shelter (Inah, Yaro, Agbor and Ukene,2014). Moreso, many scholars have shown that housing accessibility problems encountered by rental consumers are multidimensional in scale and scope, ranging from affordability, housing choices, high cost of construction and consumers low income

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etc. These works have been limited in scope and general in outlook (Awotona, 1993; Ndubueze 2001 as cited in Inah et. Al, 2014) and hence, tend to reduce the reliability of their research outcome. In the same vein, scholars in urban housing like (Nubi, 2008; UN-HABITAT 2011; Nikoofam and Mobarak, 2013; Inah et. Al, 2014) have focused their studies on affordability of commercial housing, timely housing delivery, improving the quality and quantity of housing and residential housing satisfaction of the urban poor. Hence, there is an obvious disconnect to relating housing design and environmental quality with residential housing preferences among consumers. This situation has resulted in urban housing consumers renting and dwelling in houses having no relationship between family preferences and family size and environmental quality. The objective of this paper is to examine the variables that have correlation with urban housing consumers taking critical preference decision in arriving at houses they rent in urban areas of Cross River State.

2. Literature Review

Housing as a very important commodity demands that infrastructural facilities of different types which tend to serve various functions be made available in order for rental consumers to have varied preferences and choice. Residential housing preference as a concept according to (Kim, 2020) goes beyond selecting physical location in isolation but embraces the inclusion of more other elements such as environmental quality, housing design, residential mobility factors, technical system, size of house and dwelling features. Residential housing preference as evaluation criteria in choice making is governed and influenced by socio-economic characteristics ranging from income, age, gender to the psychological effects of the housing consumers themselves. Residential housing preference in the views of (Zinas and Jusan, 2017) argued that preferences are versions of life expression, thus man becomes versions of who they were based on the different choices they make. They went further to allude that preferences and choices are lifetime phenomena and that human beings live and operates within the framework of choosing from alternatives of life's endeavours.

Given that residential housing is a multidimensional commodity, man perceive his area of abode as a shield to protect himself from daily economic and social life stress. Hence, urban consumers of residential houses should be able to make choices that tend to meet the socio-economic and physiological needs of their preferences. This can be possible when house preferences are perceived and evaluated beyond mere technical design parameters to include behavioural and environmental quality variables of surroundings. Johnson and Lebreton, (2004), reported that preference and choice models are potentially powerful in drawing out consumer housing preferences. In another study, Dhar, (1997) highlighted that preference uncertainty in residential housing consumption may lead to-choice deferral when no choice alternative has a decisive advantage. Many schools of thought in housing preference studies have viewed that that no clear-cut demarcation exist between preference and choice, that often preference and choice are intertwined in evaluation of housing consumption. Amongst these preference studies, the work of Taiwo Yusoff and Aziz (2018), was on housing preferences and choice in South West Nigeria, its framework was on the intrinsic choice of housing types and drawing variables of measurement from household size, income, price of housing, cost and availability of credit, price of the substitutes and price of the complement. Also, Sinniaha, Shah, Vigar and TeguhAdit Jandra (2016) in analyzing residential location preferences and its relationship to travel behavior in Malaysia, noted that socio-economic and religious factors such as room size, cost per room, land-use conformity, housing type and nearness to Church location.

A wholesome environment in which residential housing consumer makes preferential decision to rent is the summation of the physical and socio-cultural environment with the propensity to improve the safety and security of its dwellers. This place of habitation according to Olatubara and Fatoye, (2006) can maintain commitments, portray positive and responsible image and improve productivity of the dwellers. Housing choice and preference according to (Timmermans, Molin and Neortwijk, 1994), is majorly grouped in two modelling approaches; models that are calibrated based on observational data of household and housing preferences in real market and models derived based on assumption that the preference observed will be reflected through the influence of choices, the conditions in the market as well as the availability of housing. In order to clearly

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delineate the theoretical domain of this work, the self-congruity theory after Sirgy et al, (2000) would be adopted to achieve standard measure of consumer preference with respect to environmental security. In the views of Boksberger, Dolnicar, Laesser and Randle, (2011) as cited in Taiwo et al, (2018), self-congruity theory examined the role of self-concept in consumer behavior. Nevertheless, with time, the theory was expanded by various scholars to cover many fields and the scope cover, attitude, loyalty, preference and environmental security with respect to the relationship between one's self image and one's perceived of a particular product or service. Self-congruity theory as used in the context of housing preference and choice, expressed the relationship between the preferences of household tenants in the choice of particular housing units within the framework of laid down rules by policy initiators and housing developers. Self-congruity theory was adopted for this study because housing preferences and choice making lie within the theory of consumer behaviour in human wants and often integrating socio-psychological and environmental preference determinants of rental housing consumers. Inferring from this theory, it is believed that rental household consumers are likely to take into account both physiological and environmental preferences in arriving at the choice of residential housing. The foci of physiological and environmental preference attributes of measurement as used here were divided into six preferential categories viz: physical, environmental, economic, functional, behavioural and security. The physical preference category comprises the safety of the building and the materials used for housing development. The environmental preference category is defined in terms of the preference given to the surrounding geographical space in which the rental house is located. The economic category relates to the minimum cost of living incurred by house consumers. The functional category addresses the intrinsic derived utility value by the home consumer going by daily living, the behavioural category has to do with the security of tenancy, level of privacy, accessibility of neighborhood conveniences and shared facilities. While the security relates with location of houses prone to armed robbery, kidnapping, social vices, crime etc.

The theory/concept of self-congruity is an emerging term that has extensively been used in consumer behavior and marketing. It is a term that cannot be used without making reference to the psychological process and outcome in which consumers compare their perception of a brand personality with their own actual ideal, social and/or ideal social self-concept (Sirgy, 2018). The theory as viewed by Surgy, (op sit) relates the greater match between the brand image and how consumer's self-concept positively influences the consumption behavior and behavioral outcomes such as consumers loyalty, brand trust, positive oral brand attestation communication. Self-concept as an adjunct term of self-congruence theory is proposed as a multi-dimensional construct (Markus and Nurius, 1986; Malhotra, 1988; as in Sop, 2020); and in collaborating these paradigm, Sirgy (1980, 1982) listed the four-dimensional approach to describe self-concept in consumer behavior to include: actual self-image – how consumers see themselves, ideal self-image – how consumers would like to see themselves, social self-image – how consumers believe they are seen by others and ideal social self-image – how consumers would like to be seen by others. The self-concept as alluded in rental housing of consumers refers to mean the process where a consumer for rental accommodation makes preferences/choices in terms of the adjudged totality of the quality of life derivable in a given housing location. The self-concept or image attributes of measurement of rental housing preferences can be evaluated by integrating social and psychological determinants such as the image of the homeowner; the heterogeneous functional and symbolic aspect/facilities to support rental choice; also, functional aspect here reflects the symbolic aspects – perceived consistency with the household's self-image.

In housing, residential housing preferences goes beyond alluding to a dwelling place to include the choice of housing location with accessibility to social infrastructure that improves livability within the vicinity of individuals homes, shops, schools, open spaces, employment to physical infrastructure such as roads, water, electricity, security, waste disposal and telecommunications. Thus, either in design or occupation of a dwelling unit in any location to meet optimum requirements the rental housing choice should balance with the four multi-dimensional self-image congruence approach that ensure residential housing preferences; actual self-congruence – the congruence between the actual self-image and the house image; social self-congruence – the congruence between the social self-image and the house image and the ideal social self-congruence – the

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congruence between the ideal social self-image and the house image. Therefore, the four dimensions of this theory proposed that rent seekers give preferences to rental locations which they think have similar images to their self-concepts because they consider the housing locations preferences as an expression of their own selves (Sirgy, 1985; in Sirgy, 2020).

Hence, this paper intends to examine the factors that urban residents consider before rental preferences are made of their dwelling units in Cross River State.

3. Research Methods

3.1. Study Area

Cross River State was created in 1987 when some part of it was carved out from Akwa Ibom State. The State lies between longitudes 7°50' and 9°28'E of the Greenwich Meridian and latitude 4°28' and 6°55'N of the equator. Cross River State is bounded in the North by Benue State, in the North-West by Ebonyi State, in the South by Akwa Ibom State and the Atlantic Ocean, in the East by the Republic of Cameroun and West by Abia State. In terms of landmass, Cross River State is three times the size of Akwa State. The state has an estimated population of 3,892,988 people of which 567,747 lives and works in Calabar, 97,614 lives and works in Ugep and 46,790 lives and works in Ogoja, (NPC, 2006). It has a total land area measuring about 23,074km^2, which is divided into 18 local government areas from three political (senatorial) districts, North, Central, and South. The North senatorial district has 5 local councils, central, 6 and south, 7 respectively.

With Cross River State having improved medical care and enhanced standard of living, the growth in population becomes inevitable, giving rise to the diversification of socio-economic activities by the inhabitants. The economic diversification transforms from primary agricultural production to tertiary production with indelible mark in secondary processing, trading and civil service. Hence, the changes create more opportunities for residential housing demand, this is reflected in increase demand in residential land use.

3.2. Materials and Methods

To achieve the aim of this research work, Stratified Survey technique was employed given that the study area comprises of all the 18 local government areas viz: Cross River North (5) local government areas, Cross River Central (6) local government areas and Cross River South (7) local government areas. The state altogether has 18 local government areas. As the entire population of the state cannot be studied as a whole, a representative population of the study area was considered based on sample selection. Thus, three urban areas; Calabar municipality, Ugep and Ogoja were selected from the 18 Local Government Areas (LGAs) in the state. The selected 3 LGAs were further subdivided into wards, and 5 wards picked from Calabar, 3wards picked from Ugep and 3wards picked from Ogoja. The next stage after the survey was to select respondents by the use of convenient means to determine sample size as some expected household respondents were not willing to partake in the survey. Thus, a total of 470 houses forms the sample frame with the administration of 376 questionnaires; 200 in Calabar Metropolis, 150 in Ugep Urban and 120 in Ogoja, and retrieved 306, 134 in Calabar Metropolis, 92 in Ugep urban and 80 in Ogoja as shown in (Table 1).

`Table 1:

S/N	Ward No.	No. of houses sampled in ward	No. of questionnaires distributed	No. of questionnaire collected
CALABAR METROPOLIS				
1.	Ward1	32	23 (14.0%)	17 (12.7%)
2.	Ward 5	27	18 (11.0%)	12 (8.9%)
3	Ward 3	43	37 (22.6%)	30 (22.4%)
4	Ward 8	59	53 (32.2%)	47 (35.1%)
5.	Ward 11	39	33 (20.2%)	28 (20.9%)
UGEP URBAN				
1.	Ijom	62	51 (34.0%)	38 (41.3%)

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2	Ikpakapit	50	35 (23.3%)	30 (32.6%)
3	Bikobiko	38	26 (17.3%)	24 (26.1%)
OGOJA URBAN				
2.	Okuku	51	40 (33.3%)	35 (43.8%)
3.	Igoli	39	35 (29.1%)	29 (36.3%)
4.	Urban	30	25 (20.8%)	16 (20.0%)
	Total	**470**	**376 (100%)**	**306 (81.4%)**

Source: Field work, 2023

The designed questionnaire for the study was sub-divided into two; section one contains information on economic, behavioural, physical, functional and environmental preferences of housing needs. While the second section has to do with information on social and psychological attributes of rental consumers. To effectively measure the degree of preference index (DPI), 36 basic preference measurable variables were used based on five-point Likert scale having a corresponding response varying from 5 for most preferred, 4 for fairly preferred, 3 for preferred; 2 for unpreferred and 1 for most unpreferred. The determination of the DPI with each of the variables of preference and the whole of housing preference was arrived at by totaling a dweller's scores on all the selected variables considered together and used as determined indices of degree of preference. The index of degree of preference of a dweller is the sum of the dwellers scores expressed as a percentage of the sum of the dwellers highest scores possible on all the variables. In statistics, it is represented in equation (1) below:

$$DPI\ (IM) = \frac{\frac{\sum_{V=i}^{N} TS}{N} \ x\ 100}{\frac{\sum_{V=i} TS}{HS}}$$

Where DPI = Index of degree of preference of a rental house consumer
IM = Instrument of measurement
TS = Total scores by a house consumer on the vth variable
$\sum$ = Summation Sign
HS = Highest Score that variable V could have on the scale used ie for a five point scale (Hs= 5).
N = Total number of variables

The degree of preference of a consumer in renting any house is the highest score of the consumer's potential scores on all the variables of quality preference attributes. The outcome depicts appropriation of DPI scores indicating the extent of preference of the residential housing through the ratio of house consumers under the degree of preference. To interpret the 5-point scale, and use for the study, was to subgroup it into two points; zero (0) or one (1) degree of preference. A respondent that scorers any variable between 1 and 3 is coded as zero meaning "not preferred" while between 4 and 5 is coded as 1 and interpreted as "preferred". An average variable score (AVS) was gotten for each of the preference for attributes and were ranked in ascending order of importance. Thus, the data from the field was analyzed using descriptive and inferential statistics.

4. Results and Discussion

4.1 Socio Economic Characteristics of Respondent

The socio-economic characteristics of respondents was presented in Table 2. It showed that males dominated in the survey having 63% (58) in Ugep urban, 59.8% (80) in Calabar Metropolis and 56.3% (45) in Ogoja urban. This was expected in that the data obtained was at the household level and males basically in African settings are entrusted with the headships of their families. A reflection in the structure of the population showed that males mostly make decisions regarding choices of residential locations for their households.

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Table 2: Socio-Economic Characteristics of Respondents

UGEP URBAN				CALABAR METROPOLIS				OGOJA URBAN			
Variation	**Category**	**Frequency**	**%**	**Variation**	**Category**	**Frequency**	**%**	**Variation**	**Category**	**Frequency**	**%**
Gender	Male	58	63	**Gender**	Male	80	59.8	**Gender**	Male	45	56.3
	Female	37	37		Female	54	41.2		Female	35	43.7
	Total	**92**	**100.0**		**Total**	**134**	**100.0**		**Total**	80	100.0
Age	18 – 28	16	16.8	**Age**	18 – 28	23	17.1	**Age**	18 – 28	13	16.3
	29 -38	19	20.3		29 – 38	27	20.2		29 -38	16	20.0
	39 – 48	27	30.2		39- 48	38	28.4		39 – 48	24	30.0
	48+	30	32.7		48+	46	34.3		48+	27	33.7
	Total	**92**	**100.0**			**134**	**100.0**		**Total**	80	100.0
Marital Status	Single	19	20.3	**Marital Status**	Single	29	22.0	**Marital**	Single	16	20.0
	Married	58	62.5		Married	81	60.3	**Status**	Married	55	68.8
	Separated	6	7.2		Separated	9	6.5		Separated	3	3.7
	Widows	9	10.0		Widows	15	11.2		Widows	6	7.5
	Total	**92**	**100.0**		**Total**	**134**	**100.0**		**Total**	80	100.0
Education	Not Schooled	1	1.2	**Education**	No Schooled	2.0	1.6	**Education**	Not Schooled	1	1.3
Level	Primary	24.0	26.1	**Level**	Primary	34.0	25.7	**Level**	Primary	20	25.0
	Secondary	28.0	30.6		Secondary	37.0	27.4		Secondary	24	30.0
	Tertiary	39.0	42.1		Tertiary	61.0	45.3		Tertiary	35	43.7
	Total	**92**	**100**			**134.0**	**100.0**		**Total**	80	100.0
Household Size				**Household**				**Household**			
	0 – 4	18	19.3	**Size**	0 - 4	39	29.2	**Size**	0 – 4	14	17.5
	5 – 8	59	64.4		5 – 8	72	53.5		5 – 8	55	68.8
	9+	15	16.3		9+	23	17.3		9+	11	13.7
	Total	**92**	**100.0**			**134**	**100.0**		**Total**	80	100.0
Income	₦	32	34.4	**Income**	₦	48	36.1	**Income**	₦		
	0 – 100,000	26	28.3		0 – 100,000	40	30.2		0 – 100,000	29	36.2
	100001 - 200000	23	25.2		100001 - 200000	30	22.3		100001 - 200000	23	28.8
	200001 - 300000	11	12.1		200001 - 300000	16	11.4		200001 - 300000	20	25.0
	300001+	**92**	**100.0**		300001+	**134**	**100.0**		300001+	8	10.0
	Total								**Total**	80	100.0
Occupation	Civil servant	41	44	**Occupation**	Civil servant	55	41	**Occupatio**	Civil servant	37	46.2
	Trading	27	29		Trading	32	24	**n**	Trading	23	28.8
	artisans	9	10		artisans	17	13		artisans	8	10.0
	Farming	8	9		Farming	20	15		Farming	7	8.7
	Others	5	4		Others	10	7		Others	5	6.3
	Total	**92**	**100**			**134**	**100.0**		**Total**	80	100.0

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The ages of the respondents in the survey were dominated by those within 48 years as 33% (30) aere from Ugep urban, 34% (46) from Calabar Metropolis and 33.7% (27) from Ogoja. This was followed by those between 39 years and 47 years with 30% (27) in Ugep, 28% (38) in Calabar and 30% (24) in Ogoja. Table 2 further revealed that those that are married represented greater percent in the study area with 60% (81) Ugep, 63% (58) Calabar and 69% (55) in Ogoja. This showed that marriage is closely related with increase in household size and this often affect preferences of house consumers with regards to house size, environmental quality and safety. Notably, being married is capable of influencing certain locations for residential purposes above others. The literacy level of the respondents in the study was high with 73% (67) in Ugep, 75% (98) in Calabar and 74% (59) accounting for those with secondary and tertiary education. Those who are not educated or stopped schooling at primary school accounted for 27% (25) Ugep, 25% (36) Calabar and 26% (21) Ogoja respectively. The household size composition of the respondents examined revealed that those with 5 to 8 persons had the largest representation with 61% (186). The size of households to a greater extent influences the preference for a residential accommodation. The income status of the respondents as shown in Table 2 showed that 53% (119) lie within an income range of between ₦100,000 – ₦300,000 per annum, 35% (80) have income between N100,000 and below per annum while the remaining 12% (27) earn more than N300,000 per annum. A close look at the table further showed that amongst the four occupations respondents engage in the survey, civil servants dominate accounting for 43% (96) followed by those trading 26% (59), Artisans 11% (26), those who farm with 12% (28) and other occupations unclassified accounting for 8% (17).

The survey carried out to ascertain rental households' consumers tenure status revealed that 20% each live on inherited houses and government rented houses respectively. While those on private rents were 30%; owner occupier houses 17% and others unclassified were 9%., this is shown in figure one. The study also revealed that in Calabar Metropolis, rental household consumer tenure status was the highest with 35% of the respondents living in rented houses; while in Ugep, 33% were living in private rented houses and in Ogoja accounted for 23%. The other forms of accommodation were the public social rent and owner occupier for 25% Calabar, 15% for Ugep and 11% for Ogoja and 12% Calabar Metropolis, 22% for Ugep and 25% for Ogoja

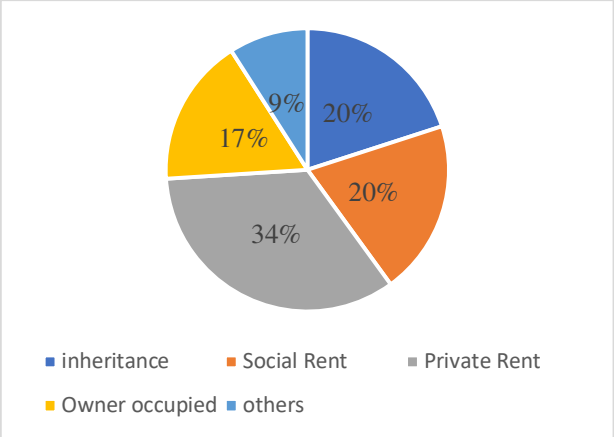

Figure 1: Rental Household Consumer Tenure Status of respondents

4.2 Measuring Degree of Preference of Household Consumers

In order to measure the extent to which rental house consumers made their preferences, a table of consumers housing preference attributes was constructed and from field variables, 36 attributes of consumer preference were selected and sub-grouped into six variables of dimension summing up all the important information in the 36 independent attributes of housing consumers preferences. These

categorized six variables are tabulated in Table 3. Amongst the identified attributes in the survey rental consumers take into consideration before preference is made is as shown in table 3. Security ranked first with 58%, followed by functional attributes, with 56%

Table 3: House Consumers Degree of Preference with Variables

Consumer Preference Variables	Preferred		Not Preferred		Total	
	No.	%	No.	%	No.	%
Economic Attributes	80	35.4	146	64.6	226	100
Environmental Attributes	102	45.1	124	54.9	226	100
Functional Attributes	127	56.2	99	43.8	226	100
Neighborhood Services Attributes	78	34.5	148	65.5	226	100
Physical Assessment Attributes	90	39.8	130	60.2	226	100
Security Assessment Attributes	130	57.5	96	42.5	226	100
Average	101	44.7	125	55.3	226	100

environment Attributes 45.1%, physical attributes 39.8% while economic and neighborhood services Attributes took the rear positions with 35.4% and 34.5% respectively. Table 3 summarily depicted consumer preference and non-preference frequency proportion of 45% and 55% (that is a ratio of 9:11). The details of individual attributes which evolve from Table 3 for measuring the degree of consumers preference for rental housing accommodation is presented in Table 4.

Table 4: Variables for Measuring Consumers Rental Degree of Housing Preference

S/N	Consumer Preference Variables	Preferred		Not Preferred		Total	
		No.	%	No.	%	No.	%
I	**Economic Attributes**						
1.	Closeness of house to market	101	44.7	125	55.3	226	100
2.	Closeness of house to place of work	86	38.1	136	61.9	226	100
3.	Closeness of house to place of worship	92	40.7	134	59.3	226	100
4.	Cost of renting house	115	50.9	111	49.1	226	100
5.	House quality/maintenance	60	26.5	166	73.5	226	100
	Average	92	40.7	134	59.3	226	100
II	**Environmental Preference**						
6.	Availability of good roads	110	48.7	116	51.3	226	100
7.	Aesthetics	99	43.8	127	56.2	226	100
8.	Proper ventilation	54	23.9	172	76.1	226	100
9.	Air/noise pollution	80	35.4	146	64.6	226	100
10.	Waste Evacuation	97	42.9	129	57.1	226	100
11	Drainage System	81	35.8	145	64.2	226	100
	Average	104	46.0	122	54.0	226	100
III	**Functionality Preference**						
12.	Parking Space	89	39,4	137	60.6	226	100
13.	Building Setbacks	61	27.0	165	73.0	226	100
14.	Level of Privacy	82	36.3	144	63.7	226	100
15.	Rooms Orientation	69	30.5	157	69.5	226	100
16.	Internal functionality of	103	45.6	123	54.4	226	100

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	house design						
	Average	81	36	145	65	226	100
IV	**Neighborhood Services Preference**						
17.	Proximity to Sports/ Recreational Centre	85	37.6	141	62.4	226	100
18.	Availability of Energy/Power	93	41.1	133	58.9	226	100
19.	Proximity to Fire Station	77	34.1	149	65.9	226	100
20	Close to Health Facility	110	48.7	116	51.3	226	100
21	Close to Security Post	104	50.4	122	49.6	226	100
22.	Close to School	67	29.6	159	70.4	226	100
23.	Close to network coverage	90	39.8	136	60.2	226	100
24.	Close to public transportation	83	36.7	143	63.3	226	100
	Average	89	39.4	137	60.6	226	100
V	**Physical Assessment Preference**						
25.	Choice due to size of house	88	38.9	138	61.1	226	100
26.	Choice due to building materials	72	31.9	154	68.1	226	100
27.	Choice due to location	94	41.6	132	58.4	226	100
28.	Choice due to room sizes	100	44.2	126	55.8	226	100
29.	Choice due to house types	56	24.8	170	75.2	226	100
30.	Choice due to house design	84	37.2	142	62.8	226	100
31	Choice due to house conveniences	42	18.6	184	81.4	226	100
	Average	77	34.1	149	65.9	226	100
VI	**Security Assessment Preference**						
32	Fenced compound	97	42.3	129	57.7	226	100
33.	Rate of Crime	150	66.4	76	33.6	226	100
34.	Prone to Erosion/Land or mud slide	90	39.8	136	60.2	226	100
35.	Prone to flooding	101	44.7	125	55.3	226	100
36.	Existing Social relations among neighborhood	75	33.2	151	66.8	226	100
	Average	103	45.6	123	54.4	226	100
	Grand Average	91	40	135	60	226	100

Source: Fieldwork, 2023.

Table 4 presents respondents' degree of preference indices of consumer behaviors under housing market. The variables motivating rental housing preferences showed that the number of respondents who do not prefer with each of the preference attributes beginning with the highest. It is explained that the

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variable having the highest percentage of degree of not preferred index will indicate the least percentage of degree of preference. In the examination of the entire not preferred variables, the choice due to house conveniences among consumers seeking for rental accommodation came top with 81.4%. This is followed by houses with poor ventilation 76.1%, type of house 75.2%, house quality and maintenance 73.5%, building setback from right of way 73% and the closeness of houses to kindergarten school within a neighborhood 70.4% etc.

In measuring the degree of non-preference or preference, it portrays the measurement of the degree of relative importance index or weight attached to an attribute taken together. The degree of preference index (RPI) was used for the analysis because it best fits the purpose of this study. According to Rosenberg, (1979) as cited in Taiwo, Yusuff and Aziz, (2018), RPI help in finding the contribution a particular variable makes to the prediction of a criterion variable both by itself and in combination with other predictor variables. In the calculation of the RPI, the formula is stated below:

$$\text{RPI} = \frac{\sum fx}{\sum f} \text{ X } \frac{1}{K}$$

Where $\sum$ = Summation Sigh
fx = The total weight given to each attribute by the respondents
f = The total number of respondents in the sample
k = The highest weight on the Likert Scale

This implies the variable with the highest RPI valve is ranked first, the next as second etc. The variable that is expressed as RPI < 0.60 signifies a variable which is considered to have a low significance. Besides, RPI indices showing $0.6 \leq \text{RPI} < 0.80$ and $\text{RPI} \geq 0.80$ is interpreted to have very high significance. It is important to note that consumers' perception on housing preference were measured on a five-point Likert scale, where from the above formula the mean item score (MIS) for each variable is calculated to obtain the RPI as given in the equation below.

$$\text{RPI} = \frac{1n_1+2n_2+\ 3n_3+\ 4n_4+\ 5n_5}{5N}$$

Where n_1 = Number of respondents for very unpreferred
n_2 = Unpreferred
n_3 = Preferred
n_4 = Very Preferred
n_5 = Very Very Preferred
N = Total number of respondents

The data collected were graded to a two-point scale of zero and one, as one through three on the five-point scale were coded as zero for "not preferred and 4 and 5 were coded 1 for preferred.

Hence,

$$\text{RPI} = \frac{n_4+\ n_5}{N}$$

The variable was then graded according to the diminishing order of their relative preference index. The highest index a variable could have is 1but the lowest depends on the study area. Thus, the more RPI approaches 1, the more the contribution of the variable to the preference for the house consumers. To find the weighted average of the RPI for each of the 36 variables above, calculation was done by summing up the products of the RPI for each ward and the proportion of respondents from the corresponding ward as shown in Table 5.

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Table 5: Relative Preference Indices of Housing Consumers for the Study Area

S/N	Consumer Preference	Frequency of responses									
	Variables	Responses					$\sum f$	$\sum fx$	* M	*RPI	*P
		5	4	3	2	1					
1	Closeness of house to market	17	32	21	66	90	226	498	2.2035	0.44	19th
2.	Closeness of house to work	12	42	29	47	96	226	505	2.2345	0.45	18th
3.	Closeness of house to worship Centre	7	33	22	40	124	226	437	1.9336	0.38	24th
4.	Cost of renting house	2	7	3	33	181	226	294	1.3009	0.25	35th
5.	House quality/Maintenance	31	69	52	41	33	226	702	3.1062	0.62	5th
6.	Availability of good road	1	17	8	31	169	226	328	1.4513	0.29	32nd
7.	Aesthetics	3	25	15	35	145	226	375	1.6593	0.33	29th
8.	Proper ventilation	40	82	38	30	36	226	738	3.2655	0.65	3rd
9.	Air/noise pollution	20	52	38	47	69	226	585	2.5885	0.52	12th
10.	Waste Evaluation	4	26	16	38	142	226	390	1.7257	0.34	28th
11.	Drainage System	19	50	37	45	75	226	571	2.6265	0.51	13th
12.	Parking space	10	37	25	40	114	226	467	2.0664	0.41	21st
13.	Building Setback	29	64	50	49	37	226	686	3.0354	0.61	6th
14.	Level of Privacy	17	49	35	48	77	226	559	2.4735	0.50	14th
15.	Rooms Orientation	25	61	46	55	39	226	656	2.9027	0.58	8th
16.	House design functionality	1	5	2	32	186	226	271	1.1991	0.24	36th
17.	Proximity to sports/recreational centre	13	44	30	48	91	226	518	2.2920	0.46	17th
18.	Availability of Engergy	6	32	21	44	123	226	432	1.9115	0.39	25th
19.	Proximity to Fire Station	21	56	41	50	58	226	610	2.6991	0.54	11th
20.	Proximity to security Post	-	15	5	28	178	226	309	1.3673	.027	33rd
21.	Proximity to Health facility	3	10	4	30	179	226	306	1.354	0.26	34th
22.	Closeness to school	26	62	47	56	35	226	666	2.9469	0.59	7th
23.	Proximity to network coverage	9	36	24	39	118	226	457	2.0221	0.40	22nd
24.	Accessibility to public transportation	16	48	34	50	78	226	552	2.4425	0.49	15th
25.	Size of house	11	38	26	41	110	226	477	2.1106	0.42	2oth
26.	Building Materials	24	60	44	53	45	226	643	2.8451	0.57	9th
27.	Choice due to location	5	30	19	39	133	226	413	1.8274	0.36	26th
28.	Choice due to room size	2	24	14	34	152	226	368	1.6283	0.32	30th
29.	Choice due to house types	36	78	49	20	43	226	722	3.1947	0.64	4th
30	Choice due to house design	15	47	33	51	80	226	544	2.4071	0.48	16th
31.	Choice due to house convenience	45	87	33	21	40	226	754	3.3363	0.68	2nd
32.	Fence Compound	7	28	17	40	134	226	409	1.8997	0.35	27th
33.	Rate of crime	69	93	19	14	31	226	883	3.6958	0.75	1st
34.	Prone to erosion/landslide/	8	35	23	37	123	226	446	1.9735	0.39	23rd

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	mudslide										
35.	Prone to flooding	1	20	10	38	157	226	348	1.5398	0.31	31st
36.	Existing social relations among neighborhood	23	59	43	51	50	226	6.32	2.7965	0.56	10th

Source: Field Work, 2023

* M = Mean, *RPI = Relative Preference Index, *P =Position

From the table, the variables from security assessment preference with the item on rate of crime ranked first with an index of 0.75 followed by the item from the physical assessment preference with 0.68 as second, 0.65 index from environment preference ranked third and induces of 0.64 and 0.62 signifying items from preference to house types, house quality and maintenance respectively ranking fourth and fifth positions etc. To gain further understanding of the RPI of consumers, a relative index of preference for house consumers from the sample wards was derived from Table 5 and arranged in a hierarchical order in Table 6.

Table 6: Relative Index of Preference of the Seven Wards

Index Preference	Weighted	Position	Attribute
Variable	N = 226 Mean		
Rate of crime	0.75	1st	*S
Choice due to house convenience	0.68	2nd	*P
Proper ventilation	0.65	3rd	*EP
Choice due to house types	0.64	4th	*P
House quality/maintenance	0.62	5th	EA
Building setback	0.61	6th	F
Closeness to school	0.59	7th	NS
Room orientation	0.58	8th	F
Building materials	0.57	9th	P
Existing social relations among neighborhood	0.56	10th	S
Proximity to fire station	0.54	11th	NS
Air/noise pollution	0.52	12th	EP
Drainage system	0.51	13th	EP
Level of privacy	0.50	14	F
Accessibility to public transport	0.49	15th	Ns
Choice due to house design	0.48	16	*P
Proximity to sports/recreational	0.46	17th	Ns
Closeness of house to work	0.45	18th	EA
Closeness of house to market	0.44	19th	EA
Size of house	0.42	20th	P
Parking space	0.41	21st	F
Network coverage	0.40	22nd	Ns
Prone to erosion/landslide/mudslide	0.39	23rd	S
Close to worship centre	0.38	24th	EA
Availability of energy	0.37	25th	Ns
Location	0.36	26th	P
Fence compound	0.35	27th	S
Waste evacuation	0.34	28th	EP
Aesthetics	0.33	29th	EP

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Room Size	0.32	30th	P
Prone to flooding	0.31	31st	S
Availability of good road	0.29	32nd	EP
Security post	0.27	33rd	Ns
Health facility	0.25	35th	Ns
Cost of renting house	0.25	35th	EA
House Design Functionality	0.24	36th	F

Source: Field Work 2023.

(EA*=Economic Attributes; EP*=Environmental Preference, F*=Functionality Preference; Ns*=Neighborhood Services; P*=Physical Assessment Preference; S*= Security Assessment Preference).

Table 6 revealed that the elements of rate of crime and preferential choice due to house conveniences like toilet facilities, kitchen, bath rooms, had the indices of 0.75 and 0.68 to show the level preference desired in the security and physical assessment attributes of a consumer. This is followed by free air circulation, type of house, house quality, building set back etc. with indices of (0.65, 0.64, 0.62 and 0.61) in the environmental, physical, economic and functional variables respectively. Nevertheless, the highest level of mostly non preferred attributes by consumers is indicated by the variables of house design, functionality, closeness to neighborhood services like hospital, security post and the preferred choice of rental accommodation in areas not susceptible to flooding with indices of (0.24, 0.25, 0.26, 0.27 and 0.29).

To further analyze the relative preference index of housing consumers in the study area, two groups were framed from table 5 using family population grouping and tenancy grouping characteristics such as large household size, rental and non-rental housing for group 1 and small household size rental and non-rental housing for group 2. To identify the most preferred attributes that the consumers desired location sites for living ANOVA test for significant difference in preference between the two-family household groups were conducted. The result showed that the F-Cal, = 4.268 > F-Tab = 3.945 at P > 0.5 was obtained for group of large and small household size, this large household size has an RPI of 0.56 or 56% for the mostly not preferred as against 0.44 or 44% preference derived for small household size.

Table 7: Aggregate Percentage Indices of the two Urban Rental Housing Consumer Subgroups

Variable	Group 1	%	Group 2	%	Aggregate % mostly not preferred
EA	0.64	60	0.28	52	0.80
EP	0.38	32	0.56	39	0.47
F	0.29	57	0.14	47	0.83
NS	0.25	16	0.49	20	0.72
P	0.30	25	0.21	14	0.85
S	0.78	74	0.30	26	0.91
Average most preferred	0.144	44	0.33	33	0.76
Aggregate % mostly not preferred		56		67	

Field work, 2023

Besides, the result for the rental and non-rental housing consumers showed that F-cal = 17.208 > F-tab = 6.735 at P > 0.01, thus having an RPI of 0.67 or 67% for the mostly not preferred as against 0.33 or 33% non-rental preference as illustrated in Table 7. This table further showed that the rental housing consumer group with large household size recorded the least preference score of 16% while the highest score of the mostly preferred of 74% for the non-rental was obtained in security attributes. In the housing consumer small household size, 14% score was obtained for the rental, while 52% as the highest score was recorded

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for the most preferred non-rental in the economic attributes. The degree of the most not preferred housing consumer population with each of the 36 variables listed in this study portrays the complexities faced by housing consumers in considering various environmental, human and socio-economic factors in arriving at preferences and choices of houses for rentage. This fact is supported by the 0.76 or 76% of the respondents who attested to the non-preference option adopted by housing consumers. The rental and non-rental small household size house consumers were not in support of seeking for accommodation in locations that are not secured in terms of armed robbery, kidnapping, burglary, flooding, erosion, menace et; showing poor physical appearance of houses and internal functioning of houses with high percentages of 91%, 85% and 83%. Other preference attributes also considered by house consumers include; economic variables 80% and neighborhood services 72%

4.3. Interpretation of Results

The findings of this study revealed that each attribute constitute a source of preference option for decision making to almost the two groups of household sizes signifying that housing consumers do not just rent any house for renting sake as physically observed by speculators in the land market but that public rental housing providers should endeavor to ensure that houses developed for commercial purposes meets minimum standards that satisfy economic, environmental, physical, functional, behavioural and security attributes of housing as both an embodiment of protection and social good. This will reduce the psychological problems house consumers face in navigating through preferential decisions making for rental accommodation. The study also uncovered that urban housing consumers have high tolerance for renting sub-standards houses lacking in most of the basic infrastructural facilities identified in this study.

5. Conclusion/Recommendations

This study was carried out at urban areas in Cross River State, Nigeria. The main aim of the study is to examine rental housing preference of urban consumers who are mostly faced with myriads of infrastructural deficiencies, environmental and social insecurity challenges in arriving at informed preference decisions of house locations to rent. The household consumer tenure status was used to classify tenancy types of consumers on one side, socio-economic characteristics of household size, education level, income and change of family cycle were used to classify house consumers tenure status into two and their degree of preference was measured within the two groups. Results indicate varied difference between the two groups especially variation preferences in the thirty-six attributes which were used as variables for the study. The two groups in the study area do not align with the united preference options available for their choices because they contend with the disparaging standards and infrastructural deficiencies observable in most houses rented by consumers. The study advocated for the review of the government housing policy that specifies guide lines to real estate developers or home-builders to incorporate in the layout of their estate development, detailed infrastructural plans in estate development to meet the demands of house consumers as well as enhance the economic value of their tenancy. Public officials charged with housing policies formulation should initiate house policies and programmes which align in agreement with the principles of sustainable development. This takes the form of civic greater participation of ordinary citizens and degree of power decentralization to local authorities in housing policy implementation. Government should commission continuous studies on preferences of the citizenry through various governmental agencies that had roles to play with housing provision. Housing development is capital intensive, as such, policy initiators of the country should formulate national economic development policies that enhances circular flow of income to its citizens and translates to economic boom on individual's housing preferences and choices.

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