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## AVERAGE MONTHLY INCOME OF RESIDENTS AS A PREDICTOR OF RESIDENTS' SATISFACTION IN PRIVATE HOUSING ESTATES IN ENUGU, NIGERIA

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### Abstract

*Socioeconomic status of residents fashion their aspirations and contributes as they make housing decisions that influence their level of satisfaction. Interest in residents' satisfaction study grew mainly with widespread consumer protection awareness over the years; thus, interests in housing has shifted from production to marketing, then to adaptation of housing output to the aspirations of the residents. The objective of this study was to investigate the average monthly income of residents and its relationship with residents' satisfaction with level of maintenance of facilities in private housing estates in Enugu, with a view to providing appropriate feedback criteria meant for improving housing satisfaction in the design and development of private housing estates. The methodology adopted for this research was survey design. The focus was on four private housing estates in Enugu metropolis randomly selected from the research population. After stratification, based on housing type, two hundred and fifty-six occupied housing units were randomly selected. Data was collected from primary sources using questionnaires and observation schedules. Average monthly income of residents (which is a socioeconomic variable) and residents' satisfaction with level of maintenance of facilities were interval variables; therefore, Pearson Product Moment correlation tool was used to test the significance of the relationship. It was established that there is a significant relationship between average monthly income of residents and residents' satisfaction with level of maintenance of facilities in the private housing. This implies that amount of money earned by residents affects their level of satisfaction with maintenance of facilities within the population of study. It was recommended that private housing rent be made affordable (i.e. 30% of average monthly income), so that the residents can afford maintenance of facilities in the estate, thereby achieve satisfaction. This is because availability of funds is of primary importance for the purposes of maintenance works.*

**Keywords:** housing maintenance, income, private housing estate, residents' satisfaction

## **INTRODUCTION**

Satisfaction is the fulfilment derived from a need. Man has some basic needs and housing is one of them. Ibem, Adeboye and Alagbe, (2015) noted that there is deficiency in housing and this in turn affects the level of residents' satisfaction if the housing they do get does not meet their needs/priorities; having profound effect on the well-being of these residents. Housing priorities of users differ among the various income groups in the society. Turner (1976) as cited in Olotuah (2015) noted that while the low income group would have preference for housing close to centres of employment, the middle and high income groups have preference for security, identity, residences with classy architectural design quality and improved amenities. Meeting residents' housing priorities would therefore significantly have impact on their satisfaction level with the housing.

The importance of satisfactory housing to the welfare of the residents cannot be overstressed as studies (Oladapo 2006; Jiboye 2010) have stated that there is a relationship between housing conditions and socioeconomic development. These conditions affect the mental health of residents in the housing. Housing needs of people are sometimes not in line with effective demand as the bulk of them do not have the resources to attain adequate housing. Research findings have shown that there is qualitative inadequacy in housing condition in Nigeria and other developing countries which can be attributed to some socioeconomic factors. However, most of previous research works have focused mainly on sociological aspects of public housing with sparse research on private housing. Essentially, the criteria guiding the designs of these estates have been based on developers' standards rather than on users' housing preference and socioeconomic adaptations. In any housing development, users play key roles by providing relevant information that could ultimately determine the value and level of satisfaction they desire.

There have been series of private housing estate developments in Enugu since the State was created, but evaluation of residents' satisfaction in the estates has not been done. It is for the reason that housing constitutes a major determinant of man's development that this study was carried out. Investigating the relationship between socioeconomic characteristics of the residents and the level of satisfaction in the housing will offer a basis for better private housing development. A review of relevant literature showed that the socioeconomic characteristics of respondents include sex, age, marital status, religion, tribe/ethnicity, occupation, educational status, income level and household size (Jiboye, 2014). For the purposes of this study, only income level is considered, thus, the objective of this study was to investigate the average monthly income of residents and its relationship with residents' satisfaction with level of maintenance of facilities in private housing estates in Enugu with a view to providing feedback criteria for improved housing satisfaction in the design and development of private housing estates. A null hypothesis was put forward which sought to establish the significant relationship between average monthly income of residents and residents' satisfaction with maintenance level of facilities in the estates. It stated that there is no significant relationship between average monthly income of residents and satisfaction with maintenance level in private housing estates in Enugu metropolis

## Study Area

Enugu is an 'Igbo' name meaning hilltop, indicating the hilly topography of the city. Enugu was one of the towns made popular by Europeans in West Africa because of availability of coal in the town (Williams, 2008). It was the administrative capital of the old Eastern Region, capital of old Anambra State and later became the capital of Enugu state with its creation as a new state in 1991. Enugu is situated between latitudes 06° 21' N and 06° 30' North of the equator, longitude 07° 26' E and 07° 37' E of Greenwich Meridian. The town has boundaries in the east with Nkanu East Local Government Area (LGA), in the west with Udi Local Government Area, in the north with Igbo-Etiti and Isiuzo Local Government Areas and in the south with Nkanu West Local Government Area. It comprises three LGAs, which are; Enugu East, Enugu North and Enugu South.

Enugu city as at 2006 had a population of 722,664 and nearly two million according to 2015 projection; population density is about 427.6 persons per square kilometre (National Population Commission, 2006). There are six rivers located in the metropolis and they are: Aria, Asata, Ekulu, Idaw, Nyaba and Ogbete rivers helping to modify the microclimate of the area. Exodus of people from all parts of Nigeria to the southeast regional capital coupled with rural-urban migration has caused a rise in population of Enugu. This movement of people has constituted problems to existing infrastructural facilities, sanitation of the environment and public services (Okoye & Chigbu, 2017).

## METHODOLOGY

The research design adopted for this study was survey method; this was done through use of questionnaire to obtain data from respondents in the area of study. The research population for included completed private housing estates within Enugu city, built and inhabited before the year 2016. Stratified random sampling of the estates based on building type was the adopted sampling method for the study. The building types in the estates were: 1-bedroom and 2-bedroom bungalows combined, 2-bedroom blocks of flats and 3-bedroom blocks of flats combined, 1-bedroom, 2-bedroom and 3-bedroom bungalows combined as shown in Table 1.

**Table 1: List of Private estates in Enugu metropolis stratified by housing type as it exists in the estates**

S/N	1-bedroom and 2-bedroom bungalows combined	1-bedroom, 2-bedroom and 3-bedroom bungalows combined	1-bedroom and 2-bedroom flats	2-bedroom and 3-bedroom flats combined
1	Nwannedinamba estate	Goshen estate	Elim estate	COSCO estate
2		Bethel estate		Refiners Estate
3		Elim estate		Central Bank quarters
4				Elim estate

Source: (Field work 2018; Goshen, 2011; Obodoh, 2009; Copen Group, 2014)

Following the stratification, random sampling by balloting was carried out and the following estates were picked to represent the various building types:

- (i) 1-bedroom and 2-bedroom bungalows combined:- Nwanne di na mba estate
- (ii) 1-bedroom, 2-bedroom and 3-bedroom bungalows combined:- Bethel estate and Elim estate
- (iii) 1-bedroom and 2-bedroom terrace flats:- Elim estate
- (iv) 2-bedroom and 3-bedroom flats combined:- Central Bank quarters

Sampling size was derived using Cochran formula for finite population:

$$n = \frac{Z^2 \times \sigma_p^2 \times N}{(N-1) e^2 + Z^2 \times \sigma_p^2}$$

Where:

n = size of sample for finite population

N = research population = 766 housing units

$\sigma_p$  = standard deviation of population assumed = 0.5

e = significance level (precision/acceptable error) chosen = 0.05

Z = standard variate at a given confidence level = 1.96 for a confidence level of 95% (Kothari, 2004)

Sample size of 256 respondents was derived and distributed to the estates in ratio of their contribution as shown in Table 2. The respondents were also required to rate their level of satisfaction based on a five-point Likert scale corresponding to: 1-Very dissatisfied; 2-Dissatisfied; 3-Neutral; 4-Satisfied; 5-Very satisfied.

**Table 2: Respondents Population in Sampled Estates**

Number	Nwanne D.N.M	Bethel	Elim	CBN quarters	TOTAL
Existing	50	131	324	261	766
Sampled	17	44	108	87	256

Source: Fieldwork, (2018)

The copies of questionnaire were administered to randomly, selected households. Women, where available, were the preferred choice for obtaining responses because of their strategic position in the home. Rapoport (1980) noted that women are better selected as respondents because women are more critical of housing than the husbands; also women are home-makers, stay at home and interact with the housing environment. This view is supported by Muoghalu (1987) which stated that women are more affected by inappropriate environments and are much more identified with the home.

## RESULTS AND DISCUSSION

Descriptive summary measures and frequency distribution for each of the variables studied were calculated. Pearson's Product Moment Correlation analysis was also conducted to test significant relationship between the two interval variables selected from the research data using Statistical Package for Social Sciences.

### Average monthly income of respondents

The data collected from respondents on average monthly income showed that residents who earn between N70, 000- N99, 999 had the highest response (43 percent) as shown in Table 3. Some 37.4 per cent of them earned between N40, 000 – N69, 999, while 6.5 per cent and 0.4 per cent of the respondents earned between N15, 000 - N39, 999 and Below N15, 000 respectively; Only 12.6 per cent of the respondents earned above N100, 000 monthly. These figures reveal that the average income level of respondents in the sampled area is fairly low.

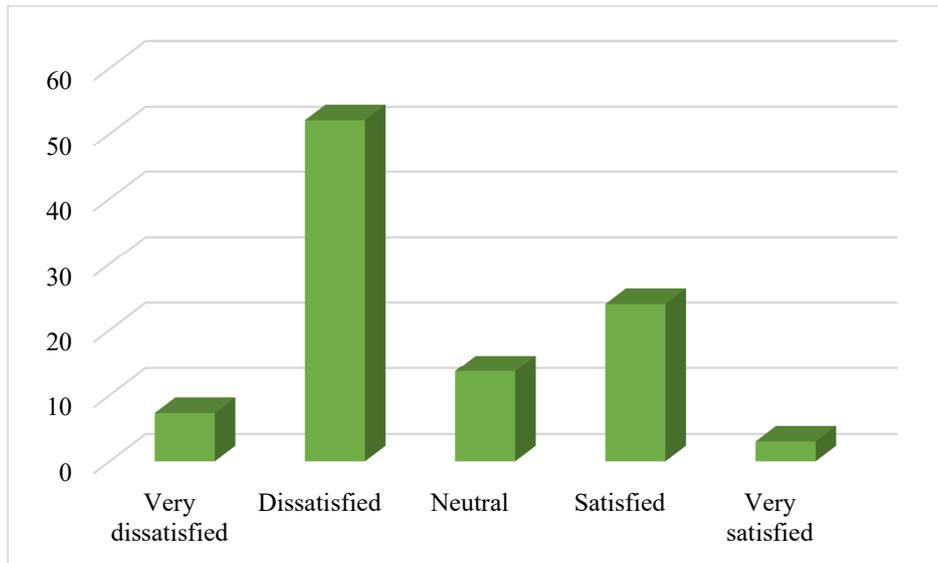
**Table 3: Data on average monthly income**

Value label	Valid Percent	Cumulative Percent
Below N15, 000	.4	.4
N15, 000 - N39, 999	6.5	7.0
N40, 000 – N69, 999	37.4	44.3
N70, 000 – N99, 999	43.0	87.4
N100,000 and above	12.6	100.0
Total	100.0	

*Source: Fieldwork, 2018*

### Analysis of level of satisfaction with maintenance of facilities within the estate (variable 51)

When level of resident's satisfaction with maintenance of facilities within the estate was checked, the results of the analysis showed that majority of respondents chose the 'dissatisfied' option, as seen in Figure 1.



**Figure 1: Level of satisfaction with maintenance of facilities in the estate**  
 Source: Fieldwork, 2018

### Test of Hypotheses

The hypothesis: ‘there is no significant relationship between average monthly income of residents and satisfaction with maintenance level in private housing estates in Enugu metropolis’ was tested. The variables -‘average monthly income’ and ‘residents’ satisfaction with maintenance level’ chosen for this analysis were interval variables. Pearson’s product moment correlation analysis tool was therefore used to test the significance of their relationship. The result from the analysis carried out indicated a Pearson’s correlation coefficient value of 0.143, with a significance probability point of 0.030. The implication of this is that a weak relationship exists between the two variables and this significance probability point of 0.030 indicates it is significant at 5% (95% compliance). It consequently means that the relationship is weak but significant. The null hypothesis is thus, rejected and the alternate hypothesis accepted; which is that: ‘there is significant relationship between average monthly income of residents and satisfaction with maintenance level of facilities in private housing estates in Enugu metropolis’. The results are presented in Table 4.

**Table 4: Pearson’s product moment correlation analysis result**

		Satisfaction with maintenance level
Average monthly income	Pearson Correlation	-.143*
	Sig. (2-tailed)	.030
	N	230

Source: Fieldwork, 2018

From the results of the analysis of data gathered, it was established statistically that there is a significant relationship between average monthly income of residents and satisfaction with maintenance level in the private housing estates in Enugu metropolis. This, therefore, implies that amount of money earned by residents affects their level of satisfaction with maintenance of

facilities within the population of study. This agrees with Mbamali and Okoli (2002) which stated that the residents are satisfied in housing if the portion set aside from the user's monthly income for acquiring or maintaining the house can achieve that without threatening other needs (that is affordable housing). Housing that is affordable could therefore be referred to as the housing which will not cost more than between the range of twenty percent and thirty percent of household's income. This suggests that affordable housing guarantees that diverse values of prices for sale or rentage do not inflict burden on the resident's income. Onyike (2007) further noted that residents who pay more than thirty percent (30%) of their income on rent, services, house loan repayment and insurance are regarded as being under housing stress.

## CONCLUSION

To achieve residents' satisfaction with maintenance of facilities in the estate, private housing developers should put in place a mechanism to ensure that adequate maintenance level in the estate is achieved at all times. There is therefore the need that these developers make rigorous efforts, not only to construct housing estates but ensure that this occurs. To facilitate this, it is vital that the housing rent is made affordable (cost not more than 30% of monthly income) so that the residents can afford to spare money for maintenance works in the estate. This is because for the purposes of maintenance works, money is of primary importance. It would seem logical, therefore, that if housing is provided with average income of groups in focus, they would be able to contribute meaningfully to its maintenance, given their resources.

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