The Impact of residents-initiated transformations in public housing Estates in Owerri Capital Territory, Imo State Nigeria

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Abstract: *The challenges of unguided housing transformations without adherence to stipulated guidelines in public housing estates has become a major concern amongst housing scholars in the global South Countries. The need for households to obtain plan approvals before engaging in housing transformation has been an important factor to consider. This study investigated the impact of residents-initiated housing transformations in public housing estates in Owerri Capital Territory Imo State Nigeria with the view to address the non-adherence to plan approval by households before making physical changes to their housing. The study draws on data obtained through structured questionnaires administered to 309 residents in the study area. The variables in focus are plan approval and physical changes to the buildings of the public housing estates in the study area which were tested using Chi-square correlation analysis tool and the result showed a significant correlation at p< 0.05. The results of the findings showed a negative impact to the environment and housing quality, when building plans are not approved before making physical changes to the buildings and housing environment. It was therefore recommend that policy makers and stakeholders in housing provision should explore more proactive and sustainable ways such as having out-post offices within the estates and digitalized plan approval systems to discourage households from engaging in physical changes to their buildings without obtaining approvals.*
Keywords: Housing transformation, Housing quality, Housing estates, plan approval, physical changes

1.0 Introduction

Housing has been identified as one of the major needs of man has been a major discourse amongst scholars. The preponderances of user-initiated housing transformation in public housing estates has raised concerns due to its attendant problems to the built environment. Housing transformation characterizes of extensions, adjustments and additions done to the physical environment and buildings so as to accommodate the housing needs of the occupants. A cursory survey in the literature has revealed that most occupants living in public housing estates do not obtain plan approval before engaging in housing transformation and such affects housing quality. The concept of obtaining plan approval permit before engaging in physical changes to the buildings would enhance housing quality and as well improve overall scenic value of the physical environment.

Housing quality amongst other definitions is the quality of the physical condition of the building, quality of the physical environment and the quality of the housing transformation (Umeh, 2023).

One of the sprawling effects of housing transformation according to a study by Rashid (2019), noted that local homemaking through user-initiated transformation enhance the demographic, social and income generating potentials amongst the occupants. However, this assertion did not consider the adverse effects of user-initiated in terms of the attendant problems to the environment without the supervisory roles of the management system and the planning authority.

Mallick and Mostafa (2022) in their investigation on transformations in government public buildings revealed that residents transforms their houses

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through direct labour, locally available materials through self-help methods without authorization from the relevant government agencies and approved building plans.

Base on the fore-going, the aim of the study is to examine the impact of user-initiated transformations in public housing estates in Owerri Capital Territory. The objective of the study is to examine the level of adherence of the occupants of the public housing estates in obtaining plan approval before making physical changes to their buildings.

The hypothesis in focus is that there is no significant relationship between plan approval process and physical changes to the building. The author sought to ask if there is a relationship between plan approvals before making physical changes to the buildings. In a tentative answer to the research question, a hypothesis is made stating that there is no significant relationship between plan approval process and physical changes to the building. The justification of the study is based on the concerns raised by housing scholars in the extant literature on the need to curb the incessant user-initiated transformations in public housing estates. Therefore, the study seeks to proffer a means to bridge the gap between the quest of occupants in housing transformation and the need to adhere to statutory procedures from the relevant authorities in housing transformation so as to improve housing quality, quality of life of the users and to improve the quality of the physical environment.

1.1   Theoretical Framework

The housing need theory was chosen to support this study. The theory was developed by Peter H. Rossi in 1955 (Mohit & Khanbadhi Rafa, 2014). The theory conceptualizes the satisfaction and dissatisfaction level of households based on their assessment of "housing needs" within their residence and residential physical environment. The housing needs of the households (spatial deficiencies, demographic changes, discrepancies based on aesthetic values, cultural values and socio-economic characteristics amongst others). These housing needs which are mostly known to be the aspirations and preferences of the households progresses and transcends through different life stages and eventually do not conform with present housing and neighbourhood qualities. Against this backdrop, the disparity between the current and desired housing needs creates stress and dissatisfaction and further more triggers household to engage in housing adjustment. Having acknowledged the importance of lifecycle changes in housing needs amongst households, the need to exercise professionalism in achieving the desired housing needs is paramount. Therefore, when housing adjustments are made with the bid to achieve satisfaction without conformity with the planning and building procedures, creates a vacuum of poor housing quality. The position of this study however acknowledges the ever-changing lifecycle housing needs as proposed in this theory and further encourages the adherence to standards of achieving it so as to mitigate any negative effects that may occur within the housing environment after housing transformations.

2.0   Literature Review
2.1   The Concept of Plan Approval Process and Housing Transformation

Development Control Agencies in State Government agencies is saddled with the duty to ensure sustainable development in human settlements across the globe (Ogunseye, 2023). Some of the specific objectives of Development Control Agencies according to Ogunseye (2023) entail the creation of awareness to the developers on the legality of planning approval process, to examine developers' preparedness level regarding planning approval level, and to examine the challenges associated with the planning approval process. Building plan approval process is one of the numerous duties of the Development Control Agencies and the problem of building plan approval has been a subject of unending issues that has bedeviled most of the developing world (Enisan and Omoyalojowo, 2023). The need for planning Agencies to improve on achieving sustainable planning approval process has been the concern of scholars in housing studies. This concern for improvement on planning approval process of which building plan approval is vital given the attendant consequences of non adherence by occupants of public housing estates before making physical changes to their buildings. Furthermore, study by Ogunseye (2023), expressed the view that most developers of public housing declared support for mandatory planning approval before development. This has been the view of this study that there is need for plan approval process before developers and occupants of public housing engage in the commencement of development or

make changes in existing development especially in public housing estates.

The concepts of building plan approval before development and making changes in existing development cuts across various developments. It entails permits for building construction, renovation, remodeling, fencing, adjustments and extensions made to existing developments. Some of the documents as required that would enhance building planning approval as practiced in development control agencies in Nigeria are; architectural drawings, structural drawings, mechanical drawings, electrical drawings, survey plan amongst other relevant documents that may be required by different Development Control Agencies across the different tiers of Government in Nigeria.

In accordance with the Nigerian Urban & Regional Planning Laws Decree No. 88, (1992) practice, it is expected that before the commencement of development, it is expected that developers should obtain planning permit but most times, most developers would like to evade that process and commence development without recourse to the attendant problems to the environment and housing quality.

Despite the efforts of relevant agencies in developing nations to sensitize citizens through various channels on the need to adhere in obtaining planning permit before embarking on development and housing transformation, yet it has yielded little or no efforts. Majority of developments has been noticed to have been marked "stop-work" due to the contravention of development for not obtaining development permit before embarking on the project.

Adedeji and Salman (2023), noted that some of the reasons why developers evade the process of obtaining approval of building plans before embarking on building projects are due to; delays in the process which is usually complex and slow, high cost of statutory payments for the permit which often times are not within the reach of the occupant and the developer. Other factors that were observed in the extant literature are; that the time frame for the approval processes of the plan which entails the documents submitted to be taken from one office to the other for vetting and for other administrative actions, delays in physical site inspection by the management system and the rigorous process in the certification of any stage of the development under transformation. In the contrary, according to Okoro (2013), other problems associated with delays in plan approval process are; non-payment of statutory fees by the developer, non-provision of relevant documents as required by the planning authority, non-submission of other important titled documents. In the bid to forestall the delays in plan approval process Enisan and Omoyalojowo (2023), recommended the need for the application and adoption of electronic planning processes so as to enhance speedy approval process and payment processes by the developers through internet channels.

3.0 Study Area

The study area is Owerri Capital Territory in Imo State. It is the capital of Imo State which is one of the 36 states of Nigeria and is in the South-Eastern region. Imo State lies within latitudes 4°45'N and 7° 15 N and longitudes 6°50 E and 7°25 E, with an area of about 5,100 sqkm. It is bordered by Abia State to the East, Delta State to the West, Anambra State to the North and Rivers state to the South (see Figure 1).

Owerri Capital Territory consists of the following Local Government Areas (LGA): Owerri North, Owerri West, Owerri Municipal and part of Ikeduru LGA, Mbaitoli LGA, Aboh-Mbaise I.GA and Ohaji Egbema LGA (Agoha, 2016) and is located approximately between latitudes 5° 47^{I} 6^{11} and $5°$ 29^{1} 6^{11} North of the equator and longitudes 7°2'5° and 7.2'6^{II} East of the Greenwich meridian (http://wikipedia.org/wikki/owerri,2009) (see Figure 2). Owerri town (within the capital Territory) is one of the largest and most populous cities in Southern Nigeria and the largest city in Imo State, with a population of 4,978,758 (National Population Commission, 2006). It has an area of approximately 100 square kilometers (40 square miles), and is located at the intersection of roads from Port Harcourt, Onitsha, Aba, Orlu, Okigwe and Umuahia, within the warm-humid climate zone of the tropical rain forest belt of Nigeria.
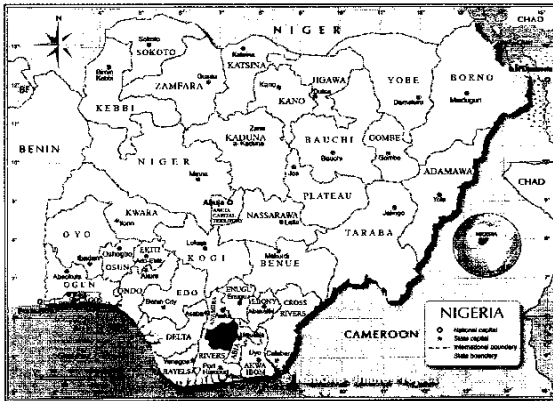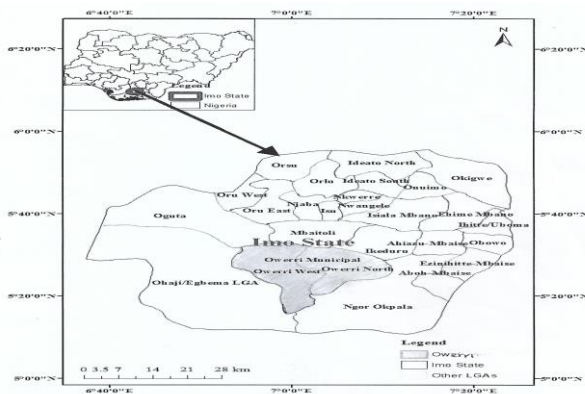
Figure 1: Map of Nigeria showing Imo State.
Source: www.everyevery.ng (2019)

Figure 1.1: Map of Imo State showing Owerri Capital Territory
Source: www.nigeriazipcodes.com (2023)

4.0 Methodology

This study was carried out in the public housing estates in Owerri Capital Territory Imo State and it is part of the wider research project were housing transformations have occurred. The research design was Survey design which involved the administration of well structured questionnaires, interview guide, observation schedule and photographic materials so as to gather data from the respondents. As at the time of survey, there were 1588 housing units in five typologies within the estates surveyed which are: World Bank Estate, Prefab Estate, Aladinma Estate, Uratta Estate, Redemption Estate, Umuguma Estate, Trans-Egbu Estate, Nekede Exclusive Garden Estate and City Garden Estate respectfully. The multi-stage sampling technique was adopted in selecting housing unit from each of the typologies identified as shown in Table 1. The second stage involved the identification of the number of housing units in each of the estates and the application of Cochran formula to obtain the respondents size.

Stratification of the estates according to house types that exists in them are; Trans-Egbu and Redemption Estate (1- bedroom, 2- bedrooms, 3-bedrooms combined). World Bank estate and Redemption Estate (1-bedroom, 2-bedrooms and 3-bedrooms and 3-bedrooms bungalow detached). Uratta estate and Tavron Estate (2-bedroom and 3-bedroom bungalows combined). City garden estate, Nekede exclusive garden estate, Umuguma estate and Prefab estate (4-bedrom bungalow and Duplex, detached).

Random sampling by balloting was done in the different typologies to represent the various building types. Based on the stratification, random sampling by balloting was carried out and the following estates were picked from each typology to represent the various building types.

i. 1 – bedroom, 2 – bedroom and 3-bedroom bungalows combined –Trans Egbu estate.
ii. 1 – bedroom, 2-bedrooms and 3-bedroom bungalows combined - World Bank estate
iii. 2 - bedrooms and 3 - bedrooms bungalow combined - Uratta estate
iv. 3 – bedroom and 4 – bedroom bungalows detached – Aladinma estate.
v. 4 – bedroom, 5-bedroom bungalow detached and duplex detached – Prefab estate

Sampling size was derived using Cochran formula for finite population:

$$n = \frac{Z^2 \times \sigma^2 p \times N}{(N-1)\, e^2 + Z^2 \times \sigma^2 P}$$ (Kothari, 2004) - - - - - - - - - (Equation 1)

Where;

N=Size of sample for finite population; N = Research population = 1,588 housing units; σP = Standard deviation of population assumed = 0.5; e = Significance level (precision and 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 309 respondents was derived as shown in Table 1.

Table 1: Respondents Population in Sampled Estates

| Number	Trans-Egbu Estate	World Bank Estate	Uratta Estate	Aladinma Estate	Prefab Estate	Total
Existing	266	500	200	350	272	1,588
Samples	52	97	39	68	53	309

Source: Fieldwork, 2021

5.0 Results and Discussion

The univariate analysis of the two variable of concern was done so as to understand the behaviour and characteristics of the variables as indicated by the respondents within the study area. Furthermore, correlational analysis was done using Chi-square statistical tool to test for significance.

5.1 Area-wise analysis of physical changes to the building

When data on whether the respondents had made physical changes to their buildings was analysed, results obtained showed that physical changes had been made to buildings in all the estates. Uratta (87.5%), Trans-Egbu (86.3%), World Bank (74.0%), and Aladinma (80.9%) estates had the highest reports. As such, Uratta estate (12.5%) had the least respondents. This is shown in Figure 1.2
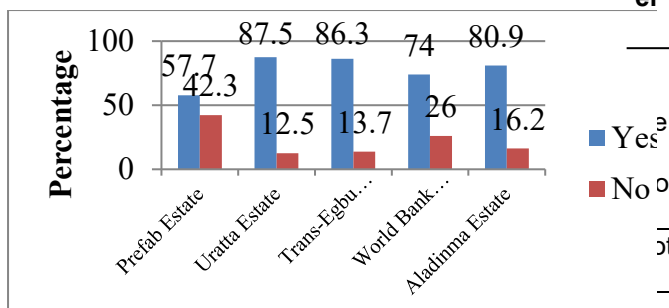
Figure 1:   Data on Physical changes to the building

Source: *(Fieldwork, 2022)*

Any physical changes to the building

Data was collected from respondents within the study population to find out if physical changes had occurred to the buildings. A greater portion (77.0%) of the respondents reported that physical changes have occurred in the buildings while a lower percentage (23.0%) of the respondents reported that physical changes have not been done to their buildings. This is shown in Table 2.

Table 2: Aggregated data on physical changes to the building

VALUE LABEL	FREQUENCY	%	CUMULATIVE %
Yes	235	77.0	77.0
No	70	23.0	100.0
Total	305	100.0	

Source: *(Field work, 2022)*

Plan approval before physical changes

Data was collected from respondents from the study area to find out how respondents from the different housing estates obtained plan approval before making physical changes to their buildings. The results showed that majority of the respondents did not obtain plan approval across the estates while a few percentages of the occupants obtained. This is illustrated by table 3.

Table 4: Area-wise data on Plan approval before physical changes

Value label	Prefab Estate			Uratta Estate					Trans-Egbu Estate
	Freq	%	Cum%	Freq	%	Cum%	Freq	%	Cum%
Yes	16	30.8	30.8	3	7.5	7.5	8	15.7	15.7
No	36	69.2	0	37	92.5	0	43	84.3	0
Tot	52	100.0	100.0	40	100.0	100.0	51	100.0	100.0

Source: *(Field work, 2022)*

Plan approval before physical changes

Data obtained under this variable showed that a greater portion of the respondents (84.7%) indicated that they did not obtain plan approval before making physical changes to their buildings while a lower proportion of the respondents (15.3%) reported to have obtained plan approval before making physical changes. This is shown in Figure 2.
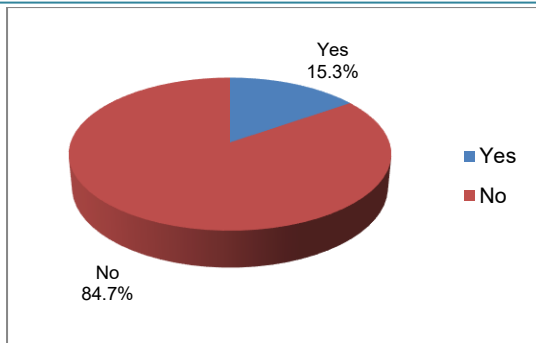
Figure 2: Plan approval before physical changes
Source: (*Field work, 2022*)

Test of Hypothesis

A null hypothesis was proposed at the outset of the research which states that; *there is no significant relationship between plan approvals*

	World Bank Estate			Aladinma Estate		
	Freq	%	Cum	Freq	%	Cum
	14	14.4	14.4	6	8.8	8.8
	83	85.6	0	62	91.2	0
	97	100.0	100.0	68	100.0	100.0

Before making physical changes to the buildings and any physical changes to the buildings in the public housing estates in the study area. The two variables were of nominal categories; therefore Chi-square test of independence analysis tool was used to test the significance. The result from the analysis showed a P-value of 0.001. This showed a high positive correlation and significance at 5%. The null hypothesis is therefore rejected and the alternate accepted which is to say that there is a significant relationship between the two variables. The result is illustrated by Table 3.

Table 3: Chi-square test analysis of relationship between plan approval before making physical changes and physical changes to the buildings

		Any Physical changes to the buildings
Plan approval before making physical changes to the buildings	Chi-square	12.791
	Df	1
	P-square	0.001

Source: *(Fieldwork, 2022)*

Based on the outcome of the result, it is pertinent to note the importance of adhering to plan approval before engaging in physical changes to the buildings in accordance with the provisions of the planning authority and management system of public housing estates.

It is expected that when there is no available housing policy to guide housing transformation, it will be difficult to provide livable and quality housing by stakeholders in housing provision (Rashid, 2019). This would further encourage the growth of slum within the estates and increase in unapproved housing stock. This is to say that lack of monitoring and management would lead to unguided transformations within the private housing estates.

CONCLUSION

The impact of user-initiated housing transformation in public housing estates in Owerri Capital Territory was investigated in this study. Findings from this study would be of help to militate the quest for occupants of public housing in initiating housing transformation without obtaining plan approval from the relevant authorities and management systems. Lessons from the study would also help to put a premium on policy makers and stakeholders in housing provision on the need to address the identified issues raised. The study equally shown that majority of the occupants of the study area does not obtain plan approval before engaging in physical changes to their buildings.

In order to sustain housing quality in public housing estates as occupants engage in housing transformation, in the study area, it is recommended that stakeholders should have out-post offices in the different housing estates and up-coming ones so as to enhance quicker and sustainable enforcement of developments in line with approved guidelines. It is also recommended that public housing providers should explore sustainable ways for digital plan approval processes so as to help occupants and developers to have seamless and quicker correspondences in

making submissions to the management systems for plan approval and for other interactions towards enhancing housing transformations.

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