



Residential Differentials in Incidence and Impact of Housing Transformation in Ogbomoso Township, Nigeria

¹Joshua Abayomi Oladele and ¹Olajoke Abolade

Abstract

The impact of residential building transformation on sustainable habitation for the populace requires empirical investigation. It is against this background that the study analyzed incidence and impact of housing transformation in Ogbomoso, Nigeria. The study sourced records of approved plans (between 2010 and 2021) from the Ministry of Lands, Housing and Urban Development and 488 copies of structured questionnaire were randomly administered on residents. Data were analyzed using percentages and Mean Weighted Values. Analysis of Variance was also used to examine variation in housing transformation across spatial units. The results revealed predominant housing transformations in Ogbomoso North Local Government Area (74.67%) than Ogbomoso South LGA (25.33%) with differential pattern of 18.75%, 61.51% and 19.74% in high, medium and low densities respectively. The result of One-way ANOVA ($p= 0.001; 0.000$) at 95% confidence level revealed that housing transformations varies significantly across spatial units. Housing transformations were reported to have resulted to high rental value (MWV=4.49; 4.32; 4.89), change in city morphology (MWV=3.92; 3.93 4.84), alteration in the physical outlook of buildings (MWV=4.16; 3.96; 4.80) and increased value of landed property (MWV=4.36; 3.81; 4.70) among others in the three density areas respectively. The study concluded that incidence and impact of housing transformation varies across density areas. In this light, the study recommends that special attention of urban planners should be directed towards preparation and implementation of development regulatory mechanism within Ogbomoso Township. Also, development control activities should be strengthened with appropriate legalisations to achieve sustainable housing development, improved habitation and livelihood of urban dwellers.

Keywords

Housing, Housing transformation, Residential densities, Development control, Sustainability

Article History

Received 28 August 2024
Accepted 27 October 2024
Published online Dec. 30, 2024

Contact

Joshua Abayomi Oladele
joshuaabayomio@gmail.com

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

1. Introduction and Background to the Study

A typical problem in developing countries is explosive urban growth, accompanied with long term neglect and dis-investment in infrastructure and housing provision (Agunbiade and Olajide, 2016). This unmet city growth is correlated with economic, social, cultural, and physical transformations in human settlement (Adamu, 2009; Oke, Bokana and Shobande, 2017). Physical transformation in human settlement is often characterized with conversion of residential structures, land-competing activities and plethora challenges on housing supply (Satterthwaite, 2010; Ojikpong, Agbor and Emri, 2016). Housing transformation occur at different levels due to varying degrees of population growth in and around the cities, to allow access to housing and economic opportunities (Drescher and Laquinta, 2002; Jenkins, Smith and Wang, 2007; United Nations Organization, 2011). However, housing

transformations do not follow urban planning regulations and mostly resulted to denial of basic need of habitation for urban inhabitants in developing countries.

In parallel with the proliferation of housing transformation, cities in developing countries with disrepair housing conditions, inadequate infrastructure and irregular morphology have evolved in response to human colonial environment (Lupala, 2002; Bloch, Fox, Monrong and Ojo, 2015). The underlying cause of proliferation of human-induced transformation in African cities are associated with small-scale alterations, incremental changes (Kamalipour and Dovey, 2019; Paul, 2020) and large-scale redevelopment activities (Jelili, Adedibu and Ayinla, 2006), accompanied by violent spatial displacement of urban poor communities (Sarkheyli, Rafieian and Taghvae, 2016).

¹Department of Urban and Regional Planning, Ladoke Akintola University of Technology, Ogbomoso, Nigeria

The increase in physical deterioration and functional obsolescence of residential buildings in African cities coupled with rapid urban (re)development predisposes the residents to constant threats of forced eviction (Lawanson and Umar, 2019; Olajide and Lawanson, 2022). Owing to this predicament, age-long buildings were often sold out to new buyers who redevelop, transform, and put them to a more viable use. One of such phenomena is transformation in the residential neighbourhoods of Nigerian indigenous cities, of which Ogbomoso is not an exception.

The connection between sustained habitation and incidence of housing transformation continue to attract attention of researchers and policy makers. As Nigerian cities witness unprecedented housing transformation, there is need for a study on incidence and impact of housing transformation across residential density areas. While existing studies investigated residents' transformation of dwelling units in public housing estates in Lagos (Aduwo, Ibe and Opoko, 2013), factors influencing transformation of prototype public housing in Northern Nigeria (Maina, 2023) and engagement of built-environment professional, a factor for improving housing transformation in public housing estates in Owerri, Nigeria (Umeh, Ezeji and Agoha, 2023). Besides, Egidario (2011) examined housing transformation and its impact on neighbourhoods in selected low-income public housing estates in Lagos. This study differs from the earlier ones by analyzing the incidence and impact of housing transformation within density areas of Nigerian medium size city using Ogbomoso as an example.

In South-western Nigeria, Ogbomoso is one of the notable, indigenous and historic cities (Edewor, 2007) in Oyo State that underwent a transformation from homogenous farming settlements to heterogeneous urban centres. In addition to being based on history and customs, Ogbomoso's indigenous architectural design, complex and diversified housing compositions reflect influences from variety of social, economic, and environmental elements (Eze and Zubairu, 2018; Alabi, 2021). Ogbomoso's cityscape, like other native communities, displays land use for residences, markets, the palaces of the obas (rulers), farms, and shrines (Amponsah, Agbola, and Mahmood, 2021).

The indigenous compound house, also known as "Agbo-Ile," is the most prevalent of the several styles of homes that have developed in Ogbomoso (Chokor, 2005). As most of the structures are in a seriously dilapidated condition, and in some cases, the compounds are inhabitable due to poor accessibility (Abdulrahman, 2018). The afro-Brazilian type is another important house form found in Ogbomoso to date. This house form gained

prominence in the entire south-western Nigeria as a result of the economic boom from cocoa and palm oil and, most importantly, the cultural mix influences of the returning Ghanaians. The architecture consists of a double but opposite row of rooms connected with a common corridor, which sometimes serves as a common place for working and sitting. Finding is indicative that architectural structures such as roomy houses, afro-Brazilian house type, storey buildings just to mention a few are being transformed without recourse to the significant impact on sustainable habitation and livelihood of people in Ogbomoso Township.

3. Materials and Methods

With approval from the Ministry of Lands, Housing and Urban Development in Ogbomoso Township, review of the registers of approved physical development plans in the Ogbomoso North and Ogbomoso South Zonal Planning Offices respectively were conducted. To ensure accuracy in the incidence of housing transformation with a particular locality within the study area. A realist approach was applied in the review of register of the development plans. This implies that records of housing transformation identified in the registers were assessed and related to specific locations in the study area. The review which spanned for a period of eleven years (2010-2021) was considered adequate on two grounds. First, the Ministry of Lands, Housing, and Urban Development in Oyo State mandated all Zonal Planning Offices to submit monthly reports of their activities to the state headquarters. The submission of the reports had spanned over eleven years, this further justified reliance on the time frame for the purpose of the study. Similar to this, Akinyode and Tareef (2013) reported that prior to 2010; updated records of building plan approval were difficult to get at the two Zonal Planning Offices.

The study setting was the three residential density areas (i.e. high, medium and low) of Ogbomoso Township. The incident of selling and demolition of private building structures to secure more space for viable uses does not have a clear-cut beginning; no date or event marks the commencement of the process in Ogbomoso town. With city expansion and the upgrading of dwelling units (or parts thereof) along major roads, particularly Ilorin-Ibadan and Igbeti-Ikirun Roads, into more economically viable uses, the housing transformation process has become manifest. It is noteworthy that from the Federal Government College area to Oke Owode along the Igbeti-Ikirun Road and from Isale General to the Ogbomoso High School Area along the Ilorin-Ibadan Road, housing improvement exercise(s) is predominant.

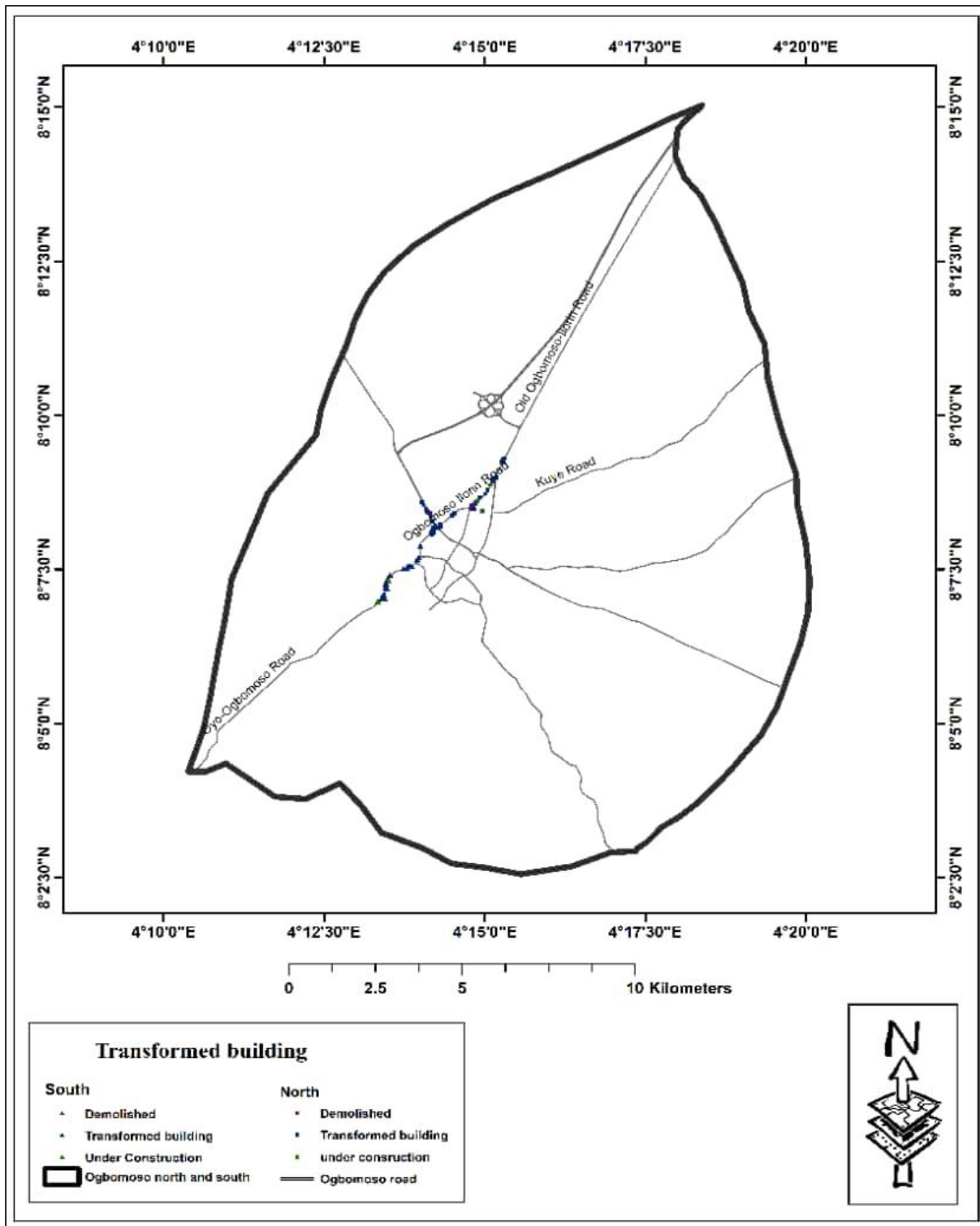


Figure 1: Housing Transformation in Ogbomosho Township
 Source: Urban and Regional Planning Department, GIS Laboratory, 2023

This is also connected with the competitive demand for space resulting from the presence of tertiary institutions such as Ladoke Akintola University of Technology, (LAUTECH), Nigerian Baptist Theological Seminary (NBTS), and two teaching hospitals, among others (Jelili and Adedibu, 2006).

A structured questionnaire was developed by the authors, based on international literature on housing transformation. Questionnaire prompts included incidence and impact of housing transformation. Structured questionnaire was administered to landlords or tenants who live in housing units within the residential areas in Ogbomosho as against public

housing estates. This was conducted at respondent's residence with the help of six (6) trained field assistants who communicated fluently in English, Pidgin and the native languages of the people.

The study's sampling frame of 66 localities and 4888 housing units were identified through Google Earth satellite imagery and ground truthing. However, twenty-four localities were purposively selected on the basis of transformational activities such as demolition of dilapidated buildings, and redevelopment. In addition, important elements such as roads and residential quarters were considered due to the unequal concentration of transformed buildings in the selected localities. Ten percent (10%) sample size of the total housing units in the study area was chosen for questionnaire. Thus, 488 copies of structured questionnaire were administered on the landlords, tenants or their representative in selected density areas in equal proportion. This method is divergent from the generally believed

pattern of population distribution within residential areas employed by Abolade, Adigun and Akande in 2013. This is because incidence of housing transformation is locality-dependent; therefore, an equal selection of respondents across the residential density area was more appropriate than the application of the ratio 3:2:1 utilized in earlier study (see Table 1).

Respondents were chosen based on stratified random sampling to obtain similar number of observations in different residential localities. Each locality was stratified on basis of distinctive features of each density areas and roads (i.e. arterial and secondary). Density areas with physically deteriorated and functionally obsolete buildings liable to transformation as well as those with transformation characteristics were considered. Enumeration of housing units in each of the area was conducted to ease questionnaire allotment to the household head or representative.

Table 1: Questionnaire Administration in the Study Area

LGAs	Primary Sampling Unit (Residential Density)	Secondary Sampling Unit (Selected Localities)	Number of Buildings	Number of Questionnaire (10%)	
Ogbomoso North	High	Oja Igbo	232	23	
		OkeElerin	219	22	
		OjaTuntun	189	19	
		Sabo	244	24	
		Orita Naira	129	13	
		Starlight	146	15	
		Medium	Oke Ado	177	18
			Takie	265	26
			Apake	250	25
			Oke Owode	212	21
		Low	Iwagba	193	19
			Maryland	223	22
			Ibapon	189	19
		Ogbomoso South	High	Ijeru	184
Laka	196			20	
Arowomole	282			28	
Medium	OjaJango		168	17	
	Idi-Oro		246	25	
	Caretaker		194	19	
	California		212	21	
	Ologbon		129	13	
	Low		High School	233	23
Adeniran			192	19	
Sunsun			183	18	
Total			24	4888	488

Source: Authors' Compilation, 2022

Data obtained from the two sources were subjected to analysis via descriptive and inferential statistics. Statistical Packages for Social Sciences (SPSS) version 20 was used for data organization and analysis. First, codes inserted as comments in an Excel file, were imported into SPSS version 20 to assist data organization and analysis. In this study, one way Analysis of variance was used to analyze spatial variations in the incidence of housing

transformation. Residents' perception of the impacts of housing transformation were summarized using Likert scale rating of "Strongly Agree", "Agree", "Indifferent", "Disagree" and "Strongly Disagree" rated as 5,4,3,2 and 1 respectively. For adequate description, Mean weighted value (MWV) was utilized to evaluate impacts of transformation through an index tagged Impact of Housing Transformation Index (IHTI).

4. Result and Discussions

This section presents result and discussion which entails incidence of housing transformation under consideration for the period of 2010 to 2021, analysis of variance and empirical result show casing the impact of housing transformation in Ogbomoso Township.

4.1 Incidence of Housing Transformation in the Study Area (2010-2021)

Incidence of housing transformation in Ogbomoso Township between 2010 and 2021 are presented in Table 2. The results indicate that the two LGAs (Ogbomoso North and Ogbomoso South) have disparities in the incidence of housing transformation. Comparing the two LGAs, higher incident (74.67%) was recorded in Ogbomoso North while only 25.33% were recorded in Ogbomoso South. The finding is a clear indication that incidence of housing transformation in Ogbomoso North is on the increase while it is less in Ogbomoso South. The reason for this observed inequality within Ogbomoso Township is a function of some influencing factors such as locational advantage, accessibility, land value, and the presence of magnetic developments like tertiary institutions, teaching hospitals, and commercial banks, among others. This is also true, as no two LGAs are perfectly the same. The variation in the incidences of housing transformation is expected since land use intensity dominated by competing activities as well as population increase in Ogbomoso North Local Government Areas. In addition, 2006 population figure for Ogbomoso North Local Government Area (198,859) in the published gazette of the National Population Commission (NPC) is higher compared to its counterpart (i.e. Ogbomoso South with 100,379) with few land uses capable of influencing the proliferation of housing transformation.

Similarly, incidence of housing transformation domicile more in the medium-density areas (61.67% and 61.04% for Ogbomoso North and Ogbomoso South respectively) along the highways and Central Business Districts of Ogbomoso. The result of the finding is likened to gentrification concept of Glass Ruth (1964) in the central neighbourhood of London. In the context of this study, residents of low socioeconomic class are displaced from dilapidated structures in the medium density areas as a result of transformation of such structures. This is evident in Plates 1, 2, 3 and 4 where obsolete residential structures were transformed to accommodate commercial and mix uses. On the contrary, incidence of housing transformation in the low (19.82% and 19.48%) and high (19.48% and 18.50%) density areas have slight differences across LGAs. It was equally observed that high residential density areas of Ogbomoso North local government areas recorded low incidence of housing transformation (18.50%). Regarding low incidence of housing transformation in the high residential density areas of Ogbomoso, one expected high incidence, but the cultural value placed on family houses in African cities does not favour housing transformation in this context. Although, core residential zones in Ogbomoso are flooded with abandoned and dilapidated structures in deteriorating residential environment, yet family members will not put their origin of descent to sale.

Further analysis and illustration of housing transformation incidences across the three residential densities (i.e., high, medium, and low) is contained in Figure 1. The results depict that more than half (61.51%) of the incidences of housing transformation within Ogbomoso township occurred in medium density. This decreases with low density (19.74%) and high density (18.75%) respectively.

Table 2: Incidence of Housing Transformation within Ogbomoso Township

	Number of transformed buildings	Residential Densities			Total
		High	Medium	Low	
Ogbomoso North	F (N)	42	140	45	227
	Percent (%)	18.50	61.67	19.82	74.67
Ogbomoso South	F (N)	15	47	15	77
	Percent (%)	19.48	61.04	19.48	25.33
Total	F (N)	57	187	60	304
	Percent (%)	18.75	61.51	19.74	100

Source: MLHUD, Ogbomoso North and Ogbomoso South Zonal Offices; Authors' Computation, 2023

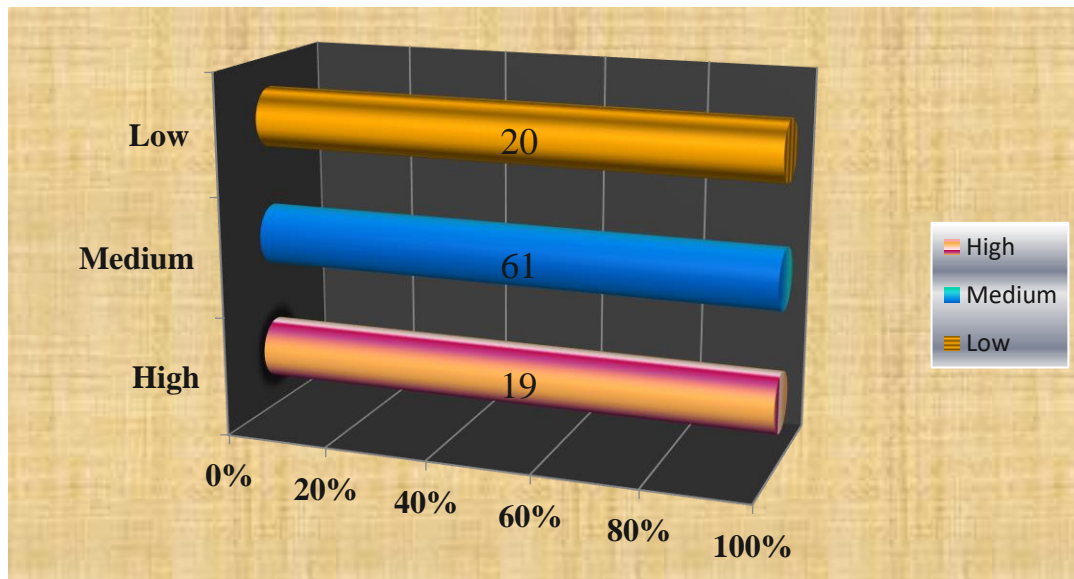


Figure 1: Housing Transformation within Residential Density Areas in Ogbomoso (%)
Source: Authors' Fieldwork, 2022



Plate 1: A Residential building undergoing transformation at Sabo Area
Source: Author's Fieldwork, 2022



Plate 2: A Residential Building transformed to Commercial Use at Isale General
Source: Author's Fieldwork, 2022



Plate 3: A Residential building transformed to office complexes at Sabo Area
Source: Author's Fieldwork, 2022



Plate 4: Residential Building undergoing transformation at Sabo Area
Source: Author's Fieldwork, 2022.

4.2 Analysis of Variance (ANOVA) of the Incidence of Housing Transformation across Spatial Units

Analysis of Variance was used to explore the interaction of two factors viz; local government areas and residential densities on the incidence of housing transformation. From Table 3, it would be easy to generalize that incidence of housing transformation varies significantly with LGAs $p=0.001$ (<0.05) and density areas $p=0.000$ (<0.05). However, this must be interpreted within the context of the interaction result as the calculated F-ratios for the two factors on incidence housing transformation are significant. This implies that, first; incidence of

housing transformation varies significantly with the two LGAs that constitute Ogbomoso Township since it is significant at 95% confidence level. Again, the mean score of the independent variables differ according to incidence of housing transformation. Secondly, in all the three identified residential density areas (i.e. high, medium and low) there exists significant variation in the incidence of housing transformation. The implication of this is that significant variation in the incidence of housing transformation is informed by the physical, economic and socio-cultural attributes of the LGAs and residential density areas.

Table 3: One-Way ANOVA (Dependent Variable: Housing Transformation)

	Sum of Squares	Df	Mean Score	F-Ratio	F-Probability	Remark
LGAs						
Between Groups	937.500	1	937.500	16.065	0.001	Significant
Within Groups	1283.833	22	58.356			
Total	2221.333	23				
Residential Density Areas						
Between Groups	917.722	2	458.861	19.946	0.000	Significant
Within Groups	759.167	33	23.005			
Total	1676.889	35				

Source: Authors' Computation, 2022

4.3 Impact of Housing Transformation in Ogbomoso Township

Housing transformation is a significant phenomenon that profoundly impacts housing facilities, residents' satisfactions as well as quantity and quality of open spaces in the built-environment, globally (Olubi and Ayoola, 2020). The identification of the impacts of the phenomenon from the perspectives of residents is of utmost importance as Nigerian cities continue to witness transformation of buildings within urban centres. Ademola (2010) argued that housing transformation in Nigeria resulted to gross reduction in residential accommodation; eviction of tenants, sale of residential building to commercial use, environmental pollution, traffic congestion and insecurity among others.

As reported by the research respondents, impact of housing transformation with the highest IHTI in the three identified density areas is high rental value. High rental value (with IHTI of 4.89, 4.49, and 4.32) in the low, high and medium residential areas respectively was perceived as the leading impact of housing transformation in the study area (see Table 4). In a similar vein, impacts with high IHT include changes in the city morphology (4.84) at the low residential densities, job opportunities for the core area dwellers (4.38) and alteration in the physical outlook (3.96) of buildings at the medium density

areas (Central Business Districts) of Ogbomoso Township.

In addition, increase in the price of landed properties (IHTI of 4.23) in the high-density area is traceable to the incidence of housing transformation. Interaction with some respondents during the field survey affirmed this, when it was stated that "*cost of two plots of land along Takie/ Sabo is as high as forty million naira (₦40,000,000) only*". It is inferred that cost of landed properties in Ogbomoso Township is high considering her level of economic development and obtainable cost of same in more developed neighbouring cities and town. This is the main reason for ever-increasing sale of residential properties to non-indigenous investors that will redevelop the structures for commercial or mixed uses.

On the contrary, some of impacts with low perceptions include visual pollution (IHTI 2.98); congestion (IHTI 2.93), family disputes (IHTI 2.88), and air pollution (IHTI 2.88). From the findings, it could be argued generally that all these variables below the mean are of little or insignificant impacts in the study area. The implication of this suggest that housing transformation has different impacts on density areas in Ogbomoso but impacts such causing family disputes, pollution, conversion of historic fabric are either non-existence or of insignificant impact.

Table 4: Impacts of Housing Transformation Index (IHTI) Computation

Impacts	High (MWV)	Medium (MWV)	Low (MWV)
High rental value	4.49	4.32	4.89
Change in physical outlook	4.16	3.96	4.80
Employment opportunities	4.36	3.81	4.70
Rise in land prices	4.23	3.88	4.45
Relocation of people	4.02	3.92	4.65
Change in city morphology	3.92	3.93	4.84
Change in building usage	4.00	3.62	4.75
Demand for dwelling unit	3.96	3.57	4.46
Purchase of obsolete building	3.82	3.62	4.57
Increased housing stock	3.66	3.69	4.55
Large scale displacement	3.60	3.73	4.51
Boost economic activities	3.26	3.34	4.53
Home based enterprises	3.65	3.32	3.29
Conversion of historic fabric of the environment	3.47	3.41	4.01
Encroachment into adjacent property line	3.38	3.22	3.81
Congestion	3.21	2.98	4.44
Family disputes	3.17	2.93	4.25
Visual pollution	3.17	2.98	4.07
Air pollution	3.23	2.88	4.07

Source: Author's Computation, 2022

5. Conclusion

The study assessed incidence and impact of housing transformation across residential densities of Ogbomoso Township. It was observed that medium density area (focal point of both public and private investors) experienced higher incidence of housing transformation than any other residential densities. The findings reflect impact of housing transformation to include high rental value, change in city morphology as well as physical outlook, employment opportunities and increased land

prices. Arising from the findings, the study recommends, among other things, that special attention of urban planners should be tailored towards preparing and implementing of development regulatory mechanism inform of operational zoning plan in Ogbomoso Township. Besides, government should strengthen development control activities within the legal frameworks towards sustainable housing development, improved habitation and livelihood of urban dwellers.

References

- Abolade, O., Adigun, F. A. and Akande, D. (2013) Impacts of Home Based Enterprises on the Quality of Life of Operators in Ibadan North Local Government, Nigeria. *International Journal of Humanities and Social Sciences Invention*, 2 (7), 1-7.
- Adamu, M. (2009) "The Impact of Rural-Urban Migration on the Economy of Rural Areas in Wudil Local Government of Kano State Nigeria" *Techno Science Africana Journal* 3(1).
- Aduwo, B.E., Iben, E.O. and Opoko, A.P. (2013). Residents' transformation of dwelling units in public housing estates in Lagos, Nigeria: Implications for policy and practice. *International Journal of Education and Research*, 1(4), 5-20.
- Agunbiade, E.M. and Olajide, O.A. (2016) Urban governance and turning African cities around: Lagos case study. *Partnership for African Social and Governance Working Paper*, (019).
- Akinyode, B.F. and Khan, T.H. (2013). Evaluation of housing provision during the last two decades in the context of Nigeria: A case study in Ogbomoso. *International Journal of Humanities and Social Science*, 3(15), 204.
- Amponsah, M., Agbola, F.W. and Mahmood, A. (2021) The Impact of Informality on Inclusive Growth in the Sub-Saharan Africa: Does Financial Inclusion Matter? *Journal of Policy Modelling*, 43 (6), 1259-1286.
- Bloch, R., Fox, S., Monrong, J. And Ojo, A (2015) Urbanization and Urban Expansion in Nigeria. *Urbanization Nigeria (URN) Research Report*. London. ICF International, Creative Commons Attribution-Non-Commercial –Share Alike.
- Chokor, B.A. (2005). Changing urban housing form and organization in Nigeria: Lessons for community planning. *Planning Perspectives*, 20(1), 69-96.
- Drescher, A.W. and Laquinta, D.L. (2002) Urbanization-Linking Development across the Urbanizing World in Housing, Planning and Design Series. Gallant, N and Tewdr-Jones M. (Eds): 1-385. Routledge Taylor and Francis Group London and New York.
- Edewor, P.A. (2007). Residential segregation in Nigeria cities. Segregation in Globalizing Cities: Interface of Global Context and Local Structures in Developing Countries, New Delhi: Rawat.
- Egidario, B.A. (2011). Housing transformation and its impact on neighbourhoods in selected low-income public housing estates in Lagos, Nigeria (*Doctoral dissertation, Covenant University*).
- Eze, C.J. and Zubairu, S.N. (2018). Socio-cultural transformation from traditional to modern architecture in Nigeria 1915-2015.
- Jelili, M.O. and Adedibu, A.A. (2006) Land Use Classification and Informal Sector Question in

- Ogbomoso, Nigeria. *Journal of Human Ecology* 20(4) 283-287.
- Jelili, M.O., Adedibu, A.A. and Ayinla, A.K. (2006) Physical Planning Implications of Housing Redevelopment in High Density Areas in Ogbomoso, Nigeria: A Pilot Study. *Journal of Human Ecology (Delhi, India)*, 20 (3), 195-199.
- Jenkins, P., Smith, H. and Wang, Y.P. (2007) Planning and Housing in the Rapidly Urbanizing World. Housing, Planning and Design Series (Gallent N and Tewdr-Jones M. Eds) 1-385. Routledge Taylor and Francis Group London and New York.
- Kamalipour, H. and Dovey, K. (2019) Mapping the visibility of informal settlements. *Habitat International*, 85, 63-75.
- Lawanson, O.I. and Umar, D.I. (2019) Gender inequality and its implication for inclusive growth in Nigeria from 1980 to 2018.
- Lupala, J.M. (2002) Urban types in rapidly urbanizing cities (Doctoral dissertation, Infrastruktur).
- Ojikpomg, B.E., Agbor, E.A. and Emri, S.I. (2016). The impact of building use conversion on residential Accommodation in Calabar, Cross River State, Nigeria. *International Journal of Science, Environment and Technology*, 5 (3), 1445-1462.
- Oke, D.M., Bokana, K.G. and Shobande, O.A. (2017). Some correlates of rural-urban led urbanization in Lagos, Nigeria. *Review of Urban and Regional Development Studies* 29(3) 185-195.
- Olajide, O. and Lawanson, T. (2022). Urban paradox and the rise of the neoliberal city: Case study of Lagos, Nigeria. *Urban Studies*, 59 (9), 1763-1781.
- Olubi, A.R. and Ayoola, H.A. (2020). Assessments of residential housing transformation in Oyo Town, Nigeria. *Environmental Technology and Science Journal of Federal University of Technology, Minna, Nigeria*, 11 (1), 49-60.
- Satterthwaite, D. (2010) The role of cities in sustainable development. *Sustainable Development Insights*, 4, 1-8.
- United Nations Organization (2011). Global urbanization and world population growth. Field Report, 16-27. New York.
- Umeh, K., Ezeji, K. and Agoha, B. (2023). The engagement of built-environment professionals, a factor for improving housing transformation in public housing estates in Owerri, Nigeria. *coou African Journal of Environmental Research*, 4(1), 1-10.