

Gentrification and Environmental Justice in Nigerian Cities

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Abstract— *Gentrification is a process of urban revitalization by which the original inhabitants of an area are displaced, owing to the purchase and upgrading of their deteriorated properties by the middle or high income households. An aspect of gentrification that is of particular interest to Nigerians is the issue of displacement, with its attendant socio-economic alienation of the poor from the city, which has evoked some environmental justice concerns. Focusing on the city of Aba, this study examined gentrification and the environmental justice question in Nigerian cities. The study adopted survey research design, making use of qualitative and quantitative methods to analyse gentrification. Cluster and simple random sampling techniques were used to select 158 displaced household heads of gentrified buildings across the various neighbourhoods in Aba, who were surveyed. Data collected were analyzed with appropriate parametric tests using SPSS. Findings show that about 698 households are displaced in the city every year due to gentrification, with an annual displacement rate of 7.5%. This gentrification induced displacements have been found to constitute significant environmental injustice to the low income city residents as it leads to their dislocation from kin, and communal heritages; forces them to move into substandard housing at the urban fringes; and constrains some to relocate to the rural areas, limiting their abilities to cope with life's challenges. The study therefore recommends among other things, that the Town Planning Authorities should create a platform to educate owners of rundown properties to adopt the model of market-led gentrification as presently practiced in Lagos city.*

Keywords— *Aba, Displacement, Environmental justice, Gentrification, Nigeria.*

I. INTRODUCTION

Gentrification is a concept developed by sociologist Ruth Glass in 1964 by which she sought to explain the socio-demographic changes in residential neighbourhoods in London, where working class low income dwellers were

being displaced by middle income earners. Certain circumstances surrounding the urbanization process of the London inner city had necessitated the middle/high income earners to buy individual residential housing units from low income working class owner-occupiers or from landlords with small property holdings within the older parts of the city. Over time, the process of gentrification transforms both the physical character of the neighbourhood as well as the socio-economic and demographic characteristics resulting in an upscale, culturally elegant, professional community (Glass, 1964). Hence, gentrification connotes transformation of the rundown, inner-city, low-income neighbourhoods into wealthy areas, usually associated with population change and improvements to the built environment (Criekingen & Decroly, 2003). Hamnett (1984) defines gentrification as the invasion by middle-class or higher-income groups, of previously working-class neighbourhoods or old and deteriorated communities, and the replacement or displacement of many of the original occupants. It involves the physical renovation or rehabilitation of deteriorated housing stock and upgrading it to meet the requirements of the new owners – a process which leads to a significant appreciation in the value of the environment as well as the price of the housing stock.

Three main theoretical concepts have been discussed in literature to explain gentrification: socio-cultural approach or consumption-orientated theory (Ley, 1994; London and Palen, 1984); the economic approach – the rent gap theory and the value gap theory (Smith, 1987; Hamnett, 1984); and the political interventions theories (Lees, 2008; Haase et al., 2010). Due to accession of wealth, ‘tertiarisation’ of jobs which followed after the Second World War, modern society began to be shaped by diverse lifestyles and various types of households. These socio-cultural shifts and their consequences on market demands as Ley (1994) identified, are the basis of the socio-cultural approach that describes the process of gentrification as the displacement of inhabitants of an area by groups of ‘new lifestyles’ that emerged due to the structural transformation towards the

post-industrial city. Ley (1994) focused on the characteristics and consumption patterns of people and identified a social group that emerged from the economic and socio-cultural changes, namely 'gentrifiers' or the 'new middle class'. As a result, the structure of the district adapts to those new requirements, and people who do not belong to those new lifestyle-groups, are not able to afford their living environment anymore and are forced to leave. Hence, gentrification occurs due to different perceptions of life.

Neo-Marxists such as Smith (1979; 1987) argued that gentrification is the result of the uneven development of many major Western industrial cities in terms of the overvaluing of the suburbs over the inner city. He therefore applies rent-gap theory to explain the depreciation of inner-city property values due primarily to suburbanization and de-industrialization, and why gentrification occurs. The rent-gap theory describes the disparity between the actual capitalized ground rent (land price) of a plot of land given its present use, and the potential ground rent that might be collected under a 'higher and better' use (Smith 1987) as basis for urban renewal. Smith, in his analysis, has shown that when the gap is sufficiently wide, real estate developers, landlords, and other people with vested interests in the development of land perceive the potential profit to be derived from re-investing in inner-city properties and redeveloping them for new tenants. Thus, the development of a rent gap creates the opportunity for urban restructuring and gentrification. The value gap theory was developed by Chris Hamnett and Bill Randolph in 1984, and defines the gap between the 'tenanted investment value', describing the actual value of the building that is based on rental incomes, and the 'vacant possession value', which describes a potential value the buildings would attain if transformed to an owner-occupied dwelling (Hamnett, 1984). According to the theory, older and decrepit apartment buildings in inner-city districts are bought by investors, who in turn proceed to modernise and transform them into condominiums, and then resell those revitalised houses with higher profit margin.

Political interventionist theories which link gentrification to policies of urban containment and inner-city resurgence such as: urban renewal; urban redevelopments; and new housing policies, have been introduced (Haase et. al., 2010). Referring to gentrification in positive terms as urban regeneration and urban sustainability, and avoiding the class constitution of the processes involved thereby neutralising the negative image that the process of gentrification brings with it, politicians withhold effects like social displacement and homogeneity of gentrified districts (Lees, et. al., 2008).

Rather, they refer to its benefits as a revitalisation of urban districts and diversion of poverty concentrations (Maloutas, 2011). This understanding perhaps informed the frequent application of urban renewal by most city-authorities in Sub-Saharan Africa to address the housing/ infrastructure problems of the inner-cities.

Hybrids theorists like Damarius (1983) and Hamnett (1984), after comparing various theories on gentrification, highlighting Smith's in particular, with residential location theory, posits that there are five main explanatory factors of gentrification, which are: first, the impact of increasing city size coupled with changes in the trade-off between preference for size and accessibility; second, changes in the demographic and household structure of the population; third, lifestyle and preference shifts; fourth, changes in the relative house price inflation and investment; and lastly, changes in the employment base and occupational structure of certain cities (Hamnett, 1984).

The process of gentrification can be associated with both positive and negative consequences depending on perceptions, and the category of urban residents mostly affected. Gentrification has been largely successful in improving the quality of the physical environment as well as in increasing the prospect of more tax revenue to government with the increased income of the new dwellers (Paul, Abimbola, & Femi, 2017). Also, due to mixture of different social groups, concentrations of poverty may be reduced and as the number of educated people in the community increases, the crime rate of the area reduces, which may equally lead to an improved image of the urban district (Hogskola, 2012). However, gentrification creates other problems such as the displacement of the original owners/occupiers of inner-city housing with the attendant loss of social diversity within the neighbourhood, loss of affordable housing for low-income earners and the inevitable commercialization of housing not only in the gentrified areas but also in adjoining neighbourhoods (Granger, 2010). The 'very poor' urban dwellers often face the harsh consequences of gentrification. Homelessness and hunger arising from demographic displacements and joblessness are the immediate results of most urban renewal and gentrification projects in Sub-Saharan Africa. Almost all natural cities in Sub-Saharan Africa are first established by very low income dwellers (Ezema et. al., 2016). Social equity demands that for modernization and urban improvement to force the 'very poor' out of their heritage, provision for resettlement should be made available, affordable and timely. However, experience over the years has shown that both the city authorities and the new

occupants of the 'hijacked cities' neither have any link with, nor make any contribution to ease the resettlement plights of the displaced poor (Agbaje, 2013). This is where the issue of Environmental Justice comes to question.

Environmental Justice Concerns must be embedded in pursuit of sustainable development in Nigeria. Environmental justice has been severally defined. Hogskola (2012) stated that environmental justice (EJ) is the fair treatment and meaningful involvement of all people regardless of race, colour, sex, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations, and policies. Environmental justice is about social transformation directed towards meeting basic human needs and enhancing the quality of life—economic life, health care, housing, human rights, environmental protection, and democracy. Environmental justice can be traced to environmental rights. There is international recognition of environmental rights (Hogskola, 2012). The right to the environment can be traced to the United Nations Conference on the Human environment and the Stockholm Declaration which emerged from it. Principle 1 of the Stockholm declaration states that “Man has a fundamental right to freedom, equality and adequate conditions of life; in environment of quality that permits a life of dignity and well being” (United Nations, 1992). The point at which a particular activity alters the environment and radically affects the way of life and economic well being of those who live within its vicinity, or poses danger to health and life, is the threshold at which the right to a clean environment is breached (Nwanna, 2012).

In an influential article, Hamilton (1995) identified three broad categories of explanations for environmental justice correlations: pure discrimination, economic efficiency, and political action. The pure discrimination theory holds that firms make production choices, including pollution emissions, based partly on their differential preferences for the welfare of different groups. If firms put a greater weight on the welfare of whites, they may systematically steer pollution into minority communities. Similarly, focused on firms' behaviour, the second explanation is that firms locate their pollution-generating facilities on the basis of economic factors that maximize their profits rather than on the basis of demographics per se. Examples might be access to inexpensive land, to transportation networks, or to other firms in their supply chain. The third explanation which is rooted on political action, and simply summarized as "coming to the nuisance," essentially reverses the causality. Regardless of the reason pollution occurs in an area, local

residents will find it undesirable. Accordingly, demand for real estate in the area will fall, and consequently so too will real estate values. The poor, being unwilling (or unable) to pay the higher housing costs required to obtain a clean environment, are the most likely to remain, or even to move in. This explanation follows the logic of Tiebout (1956), in which households "sort" into areas by their willingness to pay for public amenities. It was introduced into the environmental justice literature by Hamilton (1995). This approach continues to receive the most attention from economists and town planners interested in environmental justice questions, so it will be given the most attention in this study. By the logic of this socio-economic process, poor households sort into the community because their priority is affordable housing, which allows them to save money for other necessities, so their willingness to pay for the environment is relatively low. In contrast, wealthier gentrifiers bid up housing prices according to their willingness (capacities) to pay, harming the poorer (former) settlers who must now pay higher rents (Sieg et. al., 2004). Consequently, if the dynamics of Tiebout (1956) sorting plays an important role in explaining observed environmental justice correlations, it would appear to push back the locus of injustice from an environmental question to a more general question about the distribution of wealth, hence political action is to be held responsible.

The rate at which the core-areas of most Nigerian cities are being gentrified particularly in the past two decades is alarming, and has caused great concern among city planners and the civil society at large (Nwanna, 2012). In Nigeria, the political corruption that characterized the era of oil boom has created a class distinction with wide gap between the majority low income (poor) class and less upper income (elite) class, and a near complete disappearance of the middle income class. The resultant effect is prevalence of poverty, which in this sense refers to the deprivation of elements necessary for human survival which include clean water, food, affordable housing, health, and self-dignity (National Planning Commission, 2004). An aspect of gentrification that is of particular concern to city watchers in Nigeria is the issue of physical displacement as well as social and economic alienation of the poor from the city. The basic character of gentrification in Nigeria is such that wealthy individuals and companies offer 'attractive prices' to poor landlords of older buildings in the cities and purchase their properties. Then both the original landlord and his tenants are given notices to vacate the property, usually within a period not more than six months. Thereafter, the building is demolished and a new edifice is

erected there. As this happens, the environmental quality of the neighbourhood improves and property taxes begin to rise. Then many long-term homeowners in neighbouring properties are unable to keep up with increasing property tax rates. In the process, commercial and residential landlords often increase rent to continue earning a profit on their investment property. Other Landlords also increase rent prices because they know that renovations to the surrounding area will increase the attractiveness of their property. Eventually the poor, low income tenants are systematically displaced. Displaced residence often times find it difficult to get adequate housing at a price relative to what they were paying before, hence they are frequently forced to move into substandard housing in suburban areas, or relocate to the rural areas. Ultimately, the city's demographic profile changes. The once indigenous sociological community is destroyed and replaced by another. What is perhaps one of the most disheartening effects of gentrification in Nigerian cities is that people who once owned gracious homes in the gentrified areas, which may have needed a little maintenance, loses such property forever, while their financial proceeds may end up being utilized to pay for rented accommodation in some remote

community with very low rent regime, and any remainder utilized for household upkeep. These processes evoke a sense of environmental injustice being perpetrated on the indigent property owners and low income tenants in Nigerian cities. Unfortunately there exists no empirical study on the socio-economic and environmental effects of gentrification on the low income residents in Nigerian cities. With samples drawn from the city of Aba in South-eastern Nigeria, this study therefore examined gentrification and its implications for environmental justice for the low income city dwellers in Nigeria.

II. STUDY SETTING

The study was based on samples drawn from the city of Aba, in the south-eastern part of Nigeria; fig.1 shows the location of Aba and other major cities in Nigeria. Aba was selected for this study because of its high rate of inner-city gentrification. Moreover, the city of Aba is a good representation of the prevailing characteristics of most Nigerian cities in terms of physical development, housing, urban infrastructure, urban governance, land use development, rate of urbanization, and socio-economic development.



Fig.1: Map of Nigeria showing major cities, including Aba

Source: [www. Mapsofworld.com](http://www.Mapsofworld.com)

Among all major cities in Nigeria, one can only distinguish Abuja – federal capital territory, Lagos, Calabar, Port-Harcourt, Akure, Warri, and Kaduna in terms of conscious physical planning. Outside these major planned cities, almost every other city in Nigeria grew organically from

some rural settlement to suburban, and to fully urbanized cities. To this extent, buildings also followed this pattern in terms of their structural contents, standard and sophistication. While some property owners in these cities have upgraded their buildings to synchronize with the

modern skyline, majority others have not been able to do so due to general high level of poverty, high cost of buildings materials, and high construction costs. These less advantaged landlords are therefore under constant pressure by the elite political/business class to sale their old properties, hence the high prevalence of gentrification in Nigerian cities.

III. MATERIALS AND METHODS

This study used qualitative and quantitative methods to analyse gentrification, providing answers to a variety of questions bothering on the causes and consequences of gentrification in Nigerian cities. The spatial distribution of gentrified buildings across the city, as well as the existing building conditions were observed and mapped. Structured questionnaires were sampled on displaced household heads (former landlords and tenants) of gentrified buildings in Aba in the past ten years (2007 – 2016), which constitutes the population of study numbering 6981. The study adopted this time frame because it represents the period in which gentrification has been more prevalent in the study area. These population data were collected through the following method:

1. Thirty research assistants who are final year students of Urban and Regional Planning, Abia State Polytechnic Aba were recruited and trained for the survey
2. List of gentrified buildings in Aba between 2007 and 2016 was generated using building approval registers at the Town planning Authorities, and validated through neighbourhood by neighbourhood survey
3. The contact addresses of the present owners and the original landlords of the gentrified building were compiled with the help of building register and town planning staff in the Aba-North and Aba-South Town Planning Authorities respectively

4. Separate questionnaires were administered to the identified original landlords to compile the list/contact addresses of their tenants/occupiers (the household heads only) in their former buildings
5. Surveys were then scheduled with the original landlords and tenants in their new locations making use of structured questionnaires.

Further data about the population were derived from the combined cross-sectional and disaggregate longitudinal census data for Aba, sourced from the 2006 Population and Housing Census of the Federal Republic of Nigeria Priority Table Volume II. The sample size of approximately 158 was estimated from the population using the model derived by Miller and Brewer (2003). Cluster sampling technique was used to divide the study area into thirty zones following the neighbourhood structure of Aba, and a given number of gentrified buildings (their former landlords/tenants) were selected from each zone proportionately using simple random technique. Data collected were analyzed with appropriate parametric tests using SPSS for Windows, Version 17. Specifically, the Pearson’s Correlation was used to test the hypotheses, and P value of ≤ 0.05 was considered statistically significant.

IV. RESULTS AND DISCUSSION

4.1 Socio- Economic Characteristics of the Former occupants of gentrified buildings

The respondents in this study are the former occupants of the gentrified building in Aba most of whom have been displaced to other properties mainly at the outskirts of the city. The respondents were surveyed to determine: their household sizes; occupation of the household-heads; monthly income of the household-heads; their educational attainment; and number of rooms occupied by each household. The data are presented on table 1.

Table.1: Socio- Economic Characteristics of the displaced occupants of gentrified buildings

Category	Variables	Frequency	%	Variables	Variables	Frequency	%
Household Size	1-3	32	20.5	Number of Rooms Occupied	1	54	34.2
	4-6	85	54.5		2	90	57.0
	7-10	39	25.0		3	12	7.6
	Total	156	100		4 or more	2	1.2
					Total	158	100
Occupation of Head of Household	Public/Civil Servant	17	10.8	Educational Attainment	None	6	3.9
	Privately Employed	46	29.1		Primary	44	28.2
	Craft/Business	65	41.1		Secondary	71	45.5
	Unemployed	30	19.0		Degree	32	20.5
	Total	158	100		PG Degree	3	1.9

					Total	156	100
Monthly Income of Head of Household in Naira (₦)	< 10,000	43	27.4				
	10,000 - 50,000	68	43.3				
	50,001- 100,000	32	20.4				
	101,000 – 150,000	11	7.0				
	> 150,000	3	1.9				
	Total	157	100				

Table 1 show that about 54% of the former occupants of gentrified buildings have household sizes of between four and six persons. This is followed by those with household sizes of between seven to ten persons (25%), while the least is household sizes of one to three persons which constitute about 20%. Their occupational survey shows the dominance of those employ in some vocational crafts and private business which makes up 41% of respondents. Following this are people employed in small scale private firms (29%). Also significant is the fact that about 19% of them are unemployed. When these data are compared with the monthly income statistics of former occupants of the

gentrified buildings as illustrated in figure two, we appreciate the level of poverty among this group of people. About 28% earn less than N10,000 (\$28) per month, 43% of the respondents earn between N10,000 to N50,000 (\$28 to \$139) monthly, while only about 29% earn anything above that, with less than 2% earning salaries above N150,000 (\$420) monthly. Their level of education is just within literacy level with greater percentage (74%) having attained only primary or secondary schools; and about 21% with some college degree. In terms of number of rooms exclusively available to households, 57% occupy two room apartments, 34.2% occupy single rooms, and only about 9% occupy three room apartments or more.

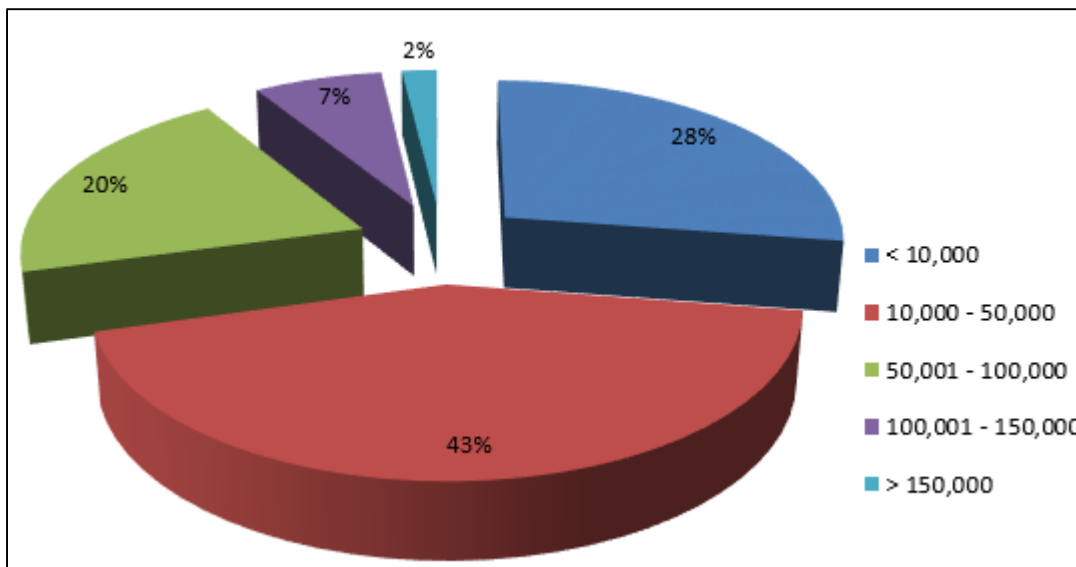


Fig.2: Monthly income of Household heads (₦)

4.2 Rate of Gentrification in Aba

Data on the existing housing stock in Aba was generated through the Priority Table Volume II of the 2006 Population and Housing Census of the Federal Republic of Nigeria, and it shows that Aba-North local government area had 24, 803 houses while Aba-South local government had 92,437, bringing the total housing stock in Aba by 2006 to

117,240 houses. Then, the number of gentrified building in Aba between 2007 and 2016 was derived using building approval registers at the Town planning Authorities, and validated through neighbourhood by neighbourhood survey. Table 2 shows the data.

Table.2: Rate of gentrification in Aba

Local government	Existing housing stock by 2006	Number of gentrified buildings/Percentage of total housing stock										Total
		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	
Aba North	24,803	*41 / **0.17	44 / 0.18	50 / 0.20	56 / 0.23	72 / 0.29	77 / 0.31	83 / 0.34	102 / 0.41	113 / 0.46	126 / 0.51	764 / 3.1
Aba South	92,437	62 / 0.07	73 / 0.08	84 / 0.09	101 / 0.11	112 / 0.12	136 / 0.15	144 / 0.16	160 / 0.17	168 / 0.18	183 / 0.20	1,223 / 1.32
Total	117,240	103 / 0.09	117 / 0.10	134 / 0.12	157 / 0.13	184 / 0.16	213 / 0.18	227 / 0.20	262 / 0.22	281 / 0.24	309 / 0.26	1,987 / 1.7%
% Mean	0.17%											
* These represent number of gentrified buildings per year												
** These represent percentage of gentrified buildings to total housing stock												

Data on table 2 is illustrated on figure 3, and show that there is progressive increase of number of gentrified buildings in Aba-north L.G.A from 41 buildings in 2007 to 126 buildings in 2016, at the average rate of 0.31% per annum. Likewise, gentrified buildings in Aba-south increased from

62 in 2007 to 183 in 2016 at average rate of 0.13% per annum. In general, 103 buildings were gentrified in 2007 in Aba, and it increased in the subsequent years to 309 in 2016 with average growth rate of 0.17% per annum.

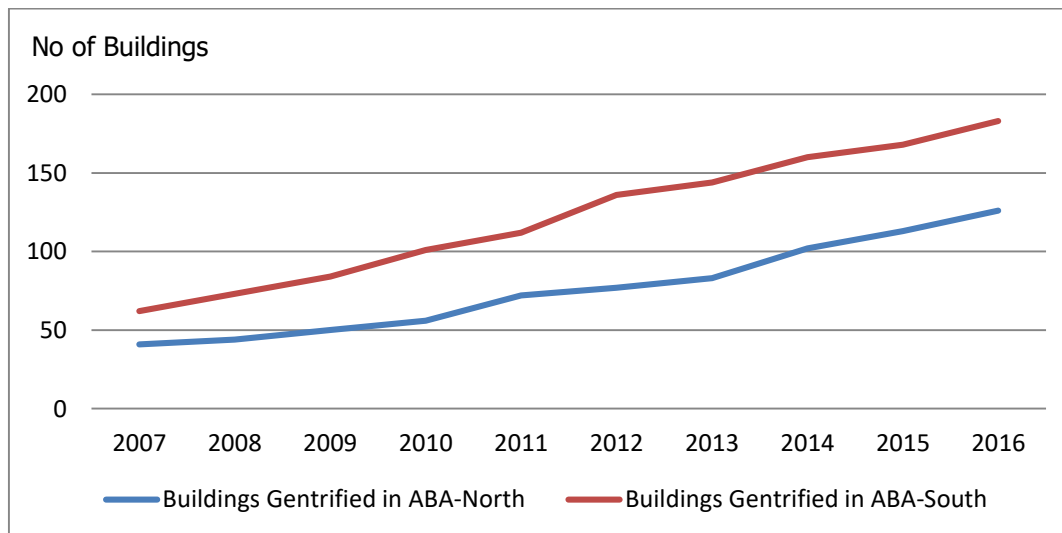


Fig.3: Rate of gentrification in Aba from 2007 to 2016

4.3 Number of Households Displaced From Gentrified Buildings in Aba

The study investigated the level of displacement arising from gentrification of inner-city buildings in Aba in the past ten years, and the result is presented on table 3. Two categories of households were surveyed: the former landlords of the gentrified buildings; and the tenants

occupying the buildings. Whereas about 5.4% of the original landlords were not displaced, a 100% of the tenants were displaced. Some of the original landlords that were not displaced happened to be those who entered into some sort of agreement with the buyers of their properties to possess some portion of it after the redevelopment.

Table.3: Total number of former households displaced in the past ten years

Local government	Number of former households Displaced per year										Total	Mean Rate (%)
Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016		
Aba North	164	159	185	202	266	275	282	362	390	463	2,748	6.4
Aba South	201	245	275	343	397	473	493	577	593	636	4,233	8.1
Total	365	404	460	545	663	748	775	939	983	1,099	6981	7.3%
Mean	698, This means average of 698 households displaced each year in the past ten years, due to gentrification											

Table 3 shows that there has been progressive increase in the number of households displaced due to gentrification in Aba in the past ten years. There is an annual displacement rate of 6.4% in Aba-North Local Government, while in Aba-South the annual displacement rate is 8.1%. An average of 698 households is displaced in the entire city of

Aba every year due to gentrification, with an annual displacement rate of 7.5%. Going by this trend as illustrated in fig.4, it means that by the year 2027 about 1,200 households will be displaced annually due to gentrification, and the total households displaced from the city will be over 15,000 in a space of 20 years.

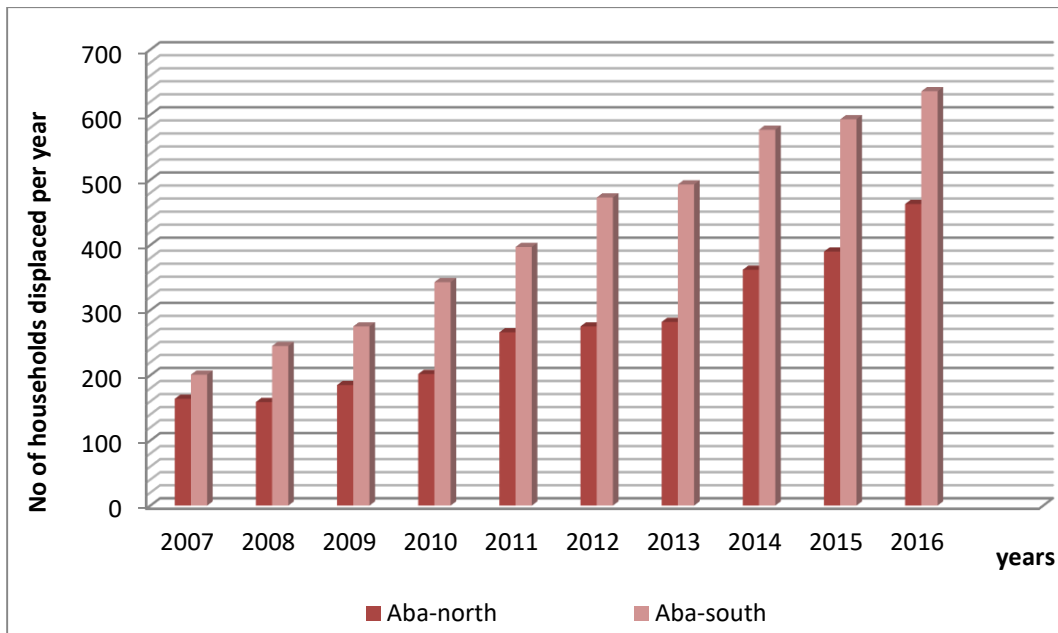


Fig.4: Trend of household displacement due to gentrification

4.4 Causes of Gentrification in Nigerian Cities

The study identified ten major causes of gentrification across cities of the world, as suggested by various authors in literature, and examined same in the study area to determine if they apply in Nigerian situation. The result is shown on table 4, which found seven of the ten listed causes of

gentrification significantly relevant in Nigerian housing market. However, some other factors examined like: pro-urban desire by the upper income class; rapid urbanization and increasing city size; and changing employment/occupational structure of city dwellers were found to be less consequential in predicting gentrification.

Table.4: Causes of gentrification

S/N	Cause	Number Sampled	Affirmative Responses	%
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1	Short supply of housing in the face of increasing demand (housing inflation) (Hamnet,1984)	158	134	84.8
2	Pro-urban desire by the upper income class (Helbrecht,1996)	158	43	27.2
3	Wide disparity between the city and suburbs in terms of infrastructure, social services, and standard of living (Marcuse 1986).	158	140	88.6
4	Poverty/financial incapacity of inner-city property owners to upgrade their housing (Hamilton, 1995)	158	139	88.0
5	Profit motive of property investors desiring to utilize the opportunity of rent-gap (Smith, 1987)	158	142	89.9
6	Wide income-gap between the poor and the middle/upper class (Hamnet,1984)	158	127	80.4
7	Rent-gap opportunity of rundown properties at the inner-city (Smith, 1987)	158	135	85.4
8	Direct government policies such as urban renewal/ upgrading (Maloutas, 2011)	158	150	94.9
9	Rapid urbanization and increasing city size (Damaruis, 1983)	158	61	38.6
10	Changing employment/ occupational structure ((Hamnet,1984)	158	35	22.2

The result revealed that over 94% of respondents affirmed that direct government policies such as urban renewal and slum upgrading increase the occurrence of gentrification. These policies improve viability of cities and consequently property value, making inner-city properties attractive to property investors. This is tied with another identified cause of gentrification: profit motive of property investors desiring to utilize the opportunity of rent-gap, which recorded 89.9% affirmation. 88.6% of households surveyed opined that wide disparity between the city and suburbs in terms of infrastructure, social services, and standard of living tend to attract property investors to rundown properties in the downtown areas, and discourage them from investing in suburban properties. This factor is also tied with another identified cause of gentrification which is rent-gap opportunity of rundown properties at the inner-city, which was affirmed by 85.4% of respondents. The richer upper-class of the society is always seeking for obsolete properties downtown, whose owners are too poor to renovate. When such properties are upgraded, rent derivable from them in Aba multiply, sometimes well above 300%. About 85% of respondents also identified short supply of housing in the face of increasing demand as another major factor that causes gentrification. Most Nigerian cities face acute shortage of low cost and medium

income housing, making private investment in housing very profitable, though housing construction in the country is very expensive and out of reach for an average income earner. A related factor fuelling gentrification is wide income-gap between the poor and the upper class of which over 80% of respondents associated with. The few rich people in the country have access to massive wealth, and have capacity to buy-up properties of the poor, who can neither improve their urban properties nor resist the pressure to sale them.

4.5 Effects of Gentrification on Original Property Owners and Occupants

The study examined original landlords/occupants randomly selected from thirty different neighbourhoods in Aba to determine the effects of gentrification on the original owners and occupants of gentrified properties. This was against the backdrop of the direct effects of displacement identified in the literature which include: social dislocation from kin and familiar environment; forced to move into substandard housing, or become homeless; relocation to suburban areas / village; loss of job/ business; Improvement in income; and improvement in standard of housing and environment. The result is presented on table 5.

Table.5: Effects of gentrifications on the original landlords and tenants

S/N	Neighbourhoods in Aba	Number of displaced	Effects and number of respondents so affected					
			Social dislocation	Forced to move into	Relocated to	Loss of job/	Improve d	Improved standard

		occupant sampled	from kin and familiar environment	substandard housing or homeless	suburban areas / village	business	income	of Housing
1	Eziama	5	3	4	3	1	0	0
2	GRA 1	5	2	3	3	0	1	1
3	GRA 2	4	4	4	4	2	0	0
4	Umuocham 1	6	4	5	4	1	0	1
5	Umuocham 2	5	4	4	3	1	0	0
6	Abayi	8	6	7	7	2	1	1
7	Brass road	4	4	4	3	1	0	0
8	Osusu	6	6	6	4	2	0	0
9	Cemetery	4	4	4	4	3	0	0
10	Omuma road	4	3	3	3	1	1	1
11	Samek	4	4	4	4	2	0	0
12	Uratta	4	2	2	2	0	2	2
13	Powerline	5	4	3	4	1	1	1
14	Faulks road	6	6	6	6	3	0	0
15	Eziukwu	4	3	4	2	1	0	0
16	Okeoha	6	5	5	5	2	1	0
17	Factory road	4	4	4	4	1	0	0
18	Aba-owerri road	9	7	8	6	2	1	1
19	Park rd - Azikiwe	6	4	5	4	1	1	1
20	Azikiwe – Ehi road	6	3	5	4	1	0	1
21	Ngwa road	6	4	5	4	2	0	1
22	OgborHill 1	7	5	7	5	2	0	0
23	OgborHill 2	6	4	5	3	1	0	1
24	East road	4	3	4	3	0	1	1
25	Umuola	5	2	3	1	0	1	1
26	Ohuru-Isimiri	4	2	3	1	1	0	1
27	7up - Glass	5	3	4	3	1	0	0
28	Ebenma	4	4	4	4	1	0	0
29	Ukegbu	5	3	4	4	1	1	1
30	Umuokahia	6	2	5	3	1	0	1
	Total / Percentage	158 / 100	*112 / **70.9	134 / 84.8	110 / 70.0	38 / 24.1	12 / 7.6	17 / 10.8
Note: * Number of respondents affected by a particular effect; ** percentage of total respondents affected								

Summary of table 5 shows that out of 158 displaced property owners/occupants surveyed, 112 (70.9%) were socially dislocated from their kin, and familiar environment. These people lost their heritage, their birth-places, or neighbourhoods where they grew up. Some of them moved away from extended family members and community relations, and their children were forced to change schools. 134 households (84.8%) were forced to move into substandard housing, and some were rendered completely homeless. Most of the landlords that sold their properties

used part of their sales to purchase lower quality housing mostly at the urban fringes, whereas the remaining part of their money were usually expended on meeting household needs like previously accumulated debts, payment of school fees, hospital bills, or even daily feeding and maintenance. Other occupants moved away, some to make-shift apartments, others became homeless. 110 households (70%) relocated to suburban areas or their respective villages. Moving back to the village was usually the last option for occupants who can no longer afford to rent house in the

city, and this usually comes with grave consequences as the persons involved are often found to be totally impoverished, depressed, traumatized, and some eventually die prematurely. About 24% of households affected by gentrification lost their jobs. This is a significant number when considered alongside the already very high unemployment rate in the country. The survey on the other hand showed that less than 8% of households affected by gentrification experienced improved income as a result; and 10.8% had improved standard of housing. However, these people may have been medium income earners whose proceeds from their sold properties were substantially adequate to enable them make more profitable investments.

4.6 Gentrification and Environmental Justice

The study utilized the Pearson's Correlation to determine if gentrification induced displacements constitute significant environmental injustice to the low income city residents in Nigeria. The primary assumption in this analysis was that: if a significant number of former occupants of gentrified buildings are dislocated from their kin, displaced to the rural areas/ suburban communities, forced to move into substandard accommodation, or lose their jobs, then environmental injustice has occurred. The study therefore formulated the following null hypotheses:

1. The number of socially dislocated households among displaced residents of gentrified buildings in Aba is not statistically significant
2. The number of households that relocated to substandard housing or rendered homeless among displaced residents of gentrified buildings in Aba is not statistically significant
3. The number of households that relocated to suburban areas or rural areas among the displaced residents of gentrified buildings in Aba is not statistically significant
4. The number of people that lost their jobs among the displaced residents of gentrified buildings in Aba is not statistically significant

For the first hypothesis, the result of the Pearson's Correlation analysis is shown in Appendix- A, and it presents $r = 0.632$, and P value of 0.0001 , which is statistically significant ($P < 0.05$ and 0.01). Hence we reject H_0 , signifying that the number of socially dislocated households among displaced residents of gentrified buildings in Aba is statistically significant. This result implies that gentrification leads to environmental injustice in Nigerian cities by the displacement and social dislocation

of the poor from their kin, and from communal heritages. The analysis of the second hypothesis presents $r = 0.866$ and P value of 0.0001 , which is statistically significant ($P < 0.05$ and 0.01) (see Appendix – A). Hence we reject H_0 , and suppose that the number of households that relocated to substandard housing, or rendered homeless among displaced residents of gentrified buildings in Aba is statistically significant. On the ground of this hypothesis we can equally conclude that gentrification results to significant environmental injustice in Nigerian cities. The result of the third hypothesis shows $r = 0.660$ and P value of 0.0001 , which is statistically significant ($P < 0.05$ and 0.01) (see also Appendix – A). Therefore we reject H_0 . This means that the number of households that relocated to suburban areas or rural areas among the displaced residents of gentrified buildings in Aba is statistically significant. By the strength of this hypothesis we equally infer that there is significant environmental injustice arising from gentrification of inner-city housing in Nigeria. The fourth hypothesis turned out $r = 0.348$ and P value of 0.059 , which is not statistically significant ($P > 0.05$ and 0.01) (see also Appendix – A). Therefore we do not reject H_0 , meaning that the number of people who lost their jobs among the displaced residents of gentrified buildings in Aba is not statistically significant. By this particular result, it means that gentrification does not significantly correlate with loss of jobs for owners/residents of gentrified properties.

The analyses presented under this section show that three out of the four variables investigated (75%) indicated that gentrification of inner-city properties in Nigeria results to some significant environmental injustice to the poor (low income) property owners and residents, by the displacement/ dislocation from their kin, and communal heritages; being forced to move into substandard housing at the urban fringes, or rendered completely homeless; and being forced to relocate to the rural areas, as the last option for occupants who can no longer afford to rent house in the city. And this usually comes with some grave consequences as the persons involved are often found to be totally impoverished, depressed, and traumatized.

V. CONCLUSION AND RECOMMENDATIONS

This study examined gentrification and its implications for environmental justice for the low income city dwellers, with samples drawn from the city of Aba in Nigeria. Findings indicate that an average of 698 households are displaced in the city every year due to gentrification, with an annual displacement rate of 7.5%, and the population group mostly

affected are the low income, most of whom fall below the poverty line. This gentrification induced displacements have been found to constitute significant environmental injustice to the low income city residents as it leads to their dislocation from kin and communal heritages; forces them to move into substandard housing at the urban fringes, or become completely homeless; and constrains them to relocate to the rural areas, limiting their abilities to cope with life's challenges, and sometimes resulting to their absolute hopelessness and death. This study has shown that while gentrification can have positive impacts on an area in terms of improved aesthetics and vitality, upgraded infrastructure, and improved capital base, it can also have negative impacts such as displacement, isolation and social dislocation. Older long-term residents are forced out, driven as much by the disappearance of familiar landmarks and memories as by rising rents, living costs and diminishing services. This results in family or generational separation. It increases homelessness for displaced residents because it is financially hard and sometimes impossible for them to find new housing and pay for moving. Children who are displaced have to change schools, which negatively impacts on their performances in school, not to mention their emotional well being and sense of stableness.

Based on the foregoing, the study therefore recommends the following: Firstly the Town Planning Authorities should create platform to educate owners of rundown properties to adopt market-led gentrification as presently practiced in Lagos city. This concept is similar to a build-operate-transfer (BOT) mechanism. It involves a property owner entering into agreement with a prospective developer to redevelop a rundown property and manage same for a stipulated period of time (usually necessary for him to recoup his investment and profit) after which the property reverts to the owner. And in order to prevent the property owner from total loss of accommodation during the period of the contract, a part of the redeveloped property is usually reserved for him. This measure has capacity to protect indigenous owners of property in downtown areas from being totally displaced. Secondly, the State governments should create City Urban Renewal Authorities (CURA) which will adopt State-led gentrification for improvement of rundown properties. The involvement of government through the CURA initiative would adopt a one-for-one replacement housing policy, whereby for each unit of rundown housing owned by private individuals that is subject for demolition, one new unit of affordable housing will be created and owned by the CURA which will serve for the relocation of property owners and tenants so

affected. Thirdly, while gentrification encourages middle/upper class influx into the inner city, the policy of improving the conditions of the poor urban dwellers should be pursued simultaneously by city authorities. Most Nigerian cities suffer from acute shortage of low income housing. This is where government social housing intervention can focus, by providing affordable low income housing in new layouts inside cities. This could be in form of housing estate for civil servants, residential quarters for primary and secondary school teachers, and corporative society housing. Fourthly, city authorities in Nigeria should evolve conscious housing policies to protect downtown residential land uses from commercial gentrification. The rate at which commercial land uses (consultancy offices, retail stores, and warehouses) are invading and succeeding old residential homes in Nigerian cities calls for serious attention as it is aggravating the already severe housing deficiency. In each of the gentrified buildings there is usually the displacement of residents especially at the ground floor and first floor by commercial activities. To arrest this trend instruments of zoning should be utilized to create residential reservations and applied during urban renewal and upgrading of cities. Lastly, the paper also recommend that rent policies of the local housing markets in Nigeria should be reviewed with the view to protecting low income renters who are constantly under threat of forced eviction in every gentrification process. Policy could specify longer period of quit-notice, say about twelve months or eighteen months, or some sort of compensation in form of relocation to alternative accommodation, or a refund of one year rent equivalent as palliatives.

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Appendix - A

Correlations 1st Hypothesis

		Number of People Displaced from Gentrified Buildings	Number of people who are socially dislocated
Number of People Displaced from Gentrified Buildings	Pearson Correlation	1	.632**
	Sig. (2-tailed)		.000
	N	30	30
Number of people who are socially dislocated	Pearson Correlation	.632**	1
	Sig. (2-tailed)	.000	
	N	30	30

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations 2nd Hypothesis

		Number of People Displaced from Gentrified Buildings	Number of people forced to move into substandard housing, or homeless
Number of People Displaced from Gentrified Buildings	Pearson Correlation	1	.866**
	Sig. (2-tailed)		.000
	N	30	30
Number of people forced to move into substandard housing, or homeless	Pearson Correlation	.866**	1
	Sig. (2-tailed)	.000	
	N	30	30

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations 3rd Hypothesis

		Number of People Displaced from Gentrified Buildings	Number of people that relocated to suburbs or Rural areas
Number of People Displaced from Gentrified Buildings	Pearson Correlation	1	.660**
	Sig. (2-tailed)		.000
	N	30	30
Number of people that relocated to suburbs or Rural areas	Pearson Correlation	.660**	1
	Sig. (2-tailed)	.000	
	N	30	30

Correlations 3rd Hypothesis

		Number of People Displaced from Gentrified Buildings	Number of people that relocated to suburbs or Rural areas
Number of People Displaced from Gentrified Buildings	Pearson Correlation	1	.660**
	Sig. (2-tailed)		.000
	N	30	30
Number of people that relocated to suburbs or Rural areas	Pearson Correlation	.660**	1
	Sig. (2-tailed)	.000	
	N	30	30

** . Correlation is significant at the 0.01 level (2-tailed).

Correlations 4th Hypothesis

		Number of People Displaced from Gentrified Buildings	Number of people that lost their jobs
Number of People Displaced from Gentrified Buildings	Pearson Correlation	1	.348
	Sig. (2-tailed)		.059
	N	30	30
Number of people that lost their jobs	Pearson Correlation	.348	1
	Sig. (2-tailed)	.059	
	N	30	30