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# **Crowding Experiences in Gentrified Multifamily Apartments in Public Housing Estates in Lagos**

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#### Abstract

In Lagos, Nigeria, the dynamics of noticeable experiences in public sector multifamily housing include situations where households of higher income and status migrate to apartments built for lower income, resulting in displacements. This situation triggers some social effects like crowding, the extent of which is not yet empirically investigated. The aim of this study was to investigate the extent to which crowding occurs in gentrified multifamily apartments belonging to Lagos State Development and Property Corporation (LSDPC). Apartments that are no longer owned by original allottees either through purchase or repurchase are classified as gentrified. A purposive case study of four LSDPC's estates was adopted. The study population was 7,764 apartments comprising low income and medium income categories. A sample of 582 (7.5%) apartments was chosen. Stratification and systematic random sampling were utilized to select apartments, based on number of bedrooms and their matching proportion in each estate. A pre-tested questionnaire was used to elicit responses from household heads. Variables of interest were number of occupants, mode of ownership (tenure), ages, gender and marital arrangement of occupants. Levels of crowding for different apartment types were computed using the universally accepted Canadian National Occupancy Standard (CNOS) and the Equivalized Crowding Index (ECI). Generally, the results showed that the gentrified apartments investigated were under-occupied, similar to the non-gentrified apartments. This suggests that gentrification is not a threat factor for overcrowding or neighbourhood population bloating in LSDPC's multifamily apartments. Therefore, social problem policies could be supported by evidence from the knowledge of crowding patterns in gentrifying households for different apartment types

**KEYWORDS:** crowding, gentrification, low-income group, middle-income group, multifamily apartments, public housing

### 1.0 Introduction

In many countries around the globe, policies on housing tend to be centered on the ideology of home ownership. This is probably hinged around the belief that expanding home ownership could alter the composition of the catchment population, thereby improving the total quality of the neighbourhoods in terms of livability. manageability safety and (Uitermark 2003; Hochstenbach and Musterd, 2017). However, the interplay of housing supply and housing demand creates a challenge that impacts the social characteristics within and across neighbourhoods.

The phenomenon of gentrification is a generic term that means different things to different stakeholders in urban management built-environment and sectors. Most academic literature feature gentrification in terms of a situation where some original apartment occupants or owners can voluntarily or involuntarily pull out of their neighbourhoods due to rising rents or home prices. This results in the displacement of residents over time to other locations (Atkinson et al. 2011). According to Yeom (2018), gentrification has different perspectives depending on who the stakeholders are. In the present circumstance, gentrification can be interpreted as a situation where persons of higher income and status migrate to public housing estates built for persons belonging to lower income and social status. The consequential displacement that occurs alters the socio-demographic reference indicators of the constituent neighbourhoods.

In Lagos, Nigeria, several apartments built for low income and middle income households the Lagos State by Development and Property Corporation (LSDPC) serve as homes populations in this income category. LSDPC and other policy makers concerned are expected to know the challenges that gentrification, defined make as. the displacement of lower income residents from their apartments an issue.

The question addressed in this study is whether or not new households who displace the original households in LSDPC's multifamily apartments face crowding pressure that should be anticipated by the agency. There is no evidence that an empirical examination of gentrification in LSDPC's multifamily apartments has been carried out in order to

establish the level of crowding pressure that new households in such apartments are likely to experience, and its impact on neighbourhood population, and budget. The outcome can utilities aptly be interpreted as a social effect of associated change tenure gentrification in LSDPC's multifamily apartments in Lagos. Original residents of a housing estate may not offer welcoming attitude or rather would tend to resist the entry of new comers if permitting such will drastically make the neighbourhood crowding level to become detrimental to existential wellbeing.

With passage of time, the dimension of demographic composition arising from gentrification-propelled displacements could affect household structure and life course. This type of social change and social-mix is a dominant phenomenon commonly understood and discussed in the gentrification literature. Understanding the overall extent to which crowding occurs in gentrified LSDPC's multifamily apartments will clearly provide information on how many people are affected and its policy implications for LSDPC.

Policy responses in this regard will generally be helpful in the aspects of household structure, family formation, having children and the impact all these can have in shaping or redirecting the process of low-income and middle-income multifamily apartments production and allocation in the study area.

### 2.0 Literature review

Gentrification has been central to housing policies at both national, regional and

local levels globally. It is nearly six decades since the German-born British sociologist and geographer Ruth (1964) brought the term to academic limelight. She coined the term to explain the intricate process in London of 1963 where a great percentage of the working class low-income quarters were invaded by the middle class and upper income group (Demirel 2015, Bailey and Robertson, 1997; Atkinsons & Wulff, 2009; Yeom 2018). The study by Ruth (1964) and the follow-up book was deeply concerned with displacement the of the income group in Islington district by the influx of middle-class residents (Bailey and Robertson, 1997).

Similarly, Atkinson and Wulff (2009) refers to gentrification as a process where persons of higher income migrate to neighborhoods or locations that are predominantly inhabited by lower socioeconomic groups. Also, Yeom (2018) stresses that the displacement of lowerincome groups is the byproduct and significant condition for understanding the gentrification process. The author contends that the displacement associated with gentrification accounts for noticeable changes pertaining to demographic characteristic, physical environment and socio-economic status. Atkinson et al. (2011) acknowledges that displacement is notably tedious to measure, but quickly points out some experiences that associated with it. Among these are the depletion of housing options for community residents. loss of the demographic and social mix that emanates from housing tenure diversity and spatial mismatches resulting from dispersed

location of work and residence. Studies of gentrification from 1970s and 1980s have attempted to introduce measured social dimensions as a proxy.

Yet the extent to which crowding occurs as a consequence of gentrification has not been a subject of substantial academic debate in recent times. Therefore. knowledge of the living arrangements among the inflowing middle income or high income gentrifying households as it relates to household crowding can be used to track the likely mismatch between LSDPC's multifamily apartments occupants over time. According to Ponder (2016), gentrification in public housing result in overcrowding displaced low-income households who consequential problems drastically leaves them without viable alternatives to adequate and affordable apartments.

The focus of the current study is, however, on the circumstances of the gentrifying In a way, this endeavor households. question of addresses the how gentrification affects the crowding levels in LSDPC's multifamily apartments and neighborhoods in the study area. This is only one of the several faces gentrification in LSDPC's apartments and estates from the interpretive perspective of demographic indicators viz crowding.

## 2.1 Measuring crowding from gentrification activity

Crowding is a social problem (Ekstam, 2015). In this study, measurement of crowding in gentrified households is in tandem with adopted standards in international research literature. However,

it is difficult to precisely identify how many households are displaced as a result of gentrification vis-a-vis those who moved into the apartments as a result of court order. Hochstenbach & Mustard (2017) further signifies that gentrification is not necessarily the dominant driver migration and displacement. Thev recognized the existence of two forms of displacement which they labelled direct and indirect. In this context some low income people may willingly or stubbornly move in as gentrifiers. This can be done by employing different coping strategies like doubling up with relatives, friends or others (Wiemers, 2014). Huisman, (2016) also contends that this can be achieved by settling for and accepting precarious housing arrangements. The existence of certain nuances of displacement makes it somewhat controversial to describe the context of gentrification in LSDPC's multifamily apartments and the associated crowding experiences of in-migrants as purely active or purely passive. However, for purposes of this research, the different categories of in-migrants were collapsed into one homogenous lump as mediumincome and high-income groups without any discrimination.

What is important is the changing patterns (if any) of crowding in gentrifying households for different apartment types. Expectedly, this will provide evidence of an increase or decrease in erstwhile LSDPC's low income estates populations.

LSDPC's apartments were designed as prototype units. Therefore residents in same locations have little or no means to choose the size of their dwelling. However, crowding is a function of household size

and living arrangements. The fact that the apartments are of standar sizes makes them relatively easier to measure and compare occupancy experiences of households during habitation.

In this study residential crowding is taken objective crowding that follows prescribed standards, as distinct from subjective crowding which interprets crowding from a personal experience perspective. Room deficit is used as an objective standard for measuring crowding. According to Ekstam (2015), room deficit index is based on the assumption that the structure of a household is a determinant of the number of rooms the household needs.

There is no single policy definition of crowding that commands international acceptability (WHO, 2018). In Sweden, for example, the standard is that for a household to be described as 'not crowded' every child and single adult should have a room to himself or herself. Domestic partners whether married or cohabiting should share a bedroom. The confusion here, however, is that the norms concerning ages and gender of the inhabitants are not emphasized.

This deficiency or omission is taken care of by the European Union Standard, which considers the ages and gender of children in the allocation of sleeping spaces and rooms. In this case children below the age of 12 years are permitted to share a room, withstanding their gander. acceptable measure and standards for minimum space occupancy is a sine qua non for interpreting crowding in any This is why some researchers recommend place-based and culture-based approaches to determining whether or not an apartment is crowded (Ekstam, 2015).

### 3.0 Methodology

The focus of this study is more about displacement of lower income households arising from change of ownership as a result of capital investment by higher income households. Apartments that have been purchased or repurchased are taken to have been gentrified. In other words, the study identifies apartments that are no longer owned by the original allottees as gentrified apartments whether in the low income category or medium income category.

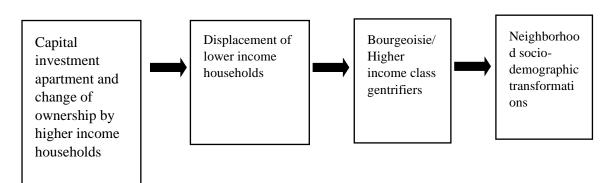


Figure 1.0: Production cum consumption-based conceptual approach

Real estate capital appreciation appears to be the main consideration more than physical changes or transformations in the neighbourhood. The conceptual order of production cum consumption-based approach was followed in the current research (Figure 1.0).

In order to operationalize this production consumption-based conceptual approach, the issue of focus is the change from those who owned their apartments through allocation by LSDPC to those who later purchased the apartments from the allottees. The idea is to access how the changes occasioned by this population of interest impacts on the overall quality of the selected LSDPC's estates from the perspective of crowding, a worrisome social and urban phenomenon in Lagos. The framework is to provide an insight into the scale of crowding dynamics in LSDPC's gentrified apartments as a way to better understand the dimension and complexity of gentrification.

Case study: A case study methodology was used. Three low income estates were purposively selected from nine available in the LSDPC staple; while one medium income estate was purposively selected from three available. These were (i) Low income estate at Abesan with 4.272 apartments (ii) low income estate at Iba with 2,388 apartments (iii) low income Dolphin-Ikovi with 640 estate at apartments (iv) medium income estate at Ebute Metta with 528 apartments. They were considered capable of providing leading indicators of gentrification at the apartment level especially on housing tenure, average household incomes, occupancy and displacement of original residents.

The current research focuses on crowding measurements as an estimate of the social dimensions of the experience of gentrification in LSDPC's multifamily apartments

The total number of apartments in the four selected estates amounts to 7,764 and this represents the study population, from which a sample of 582 (7.5%) apartments was chosen. Published guidelines from previous researchers provided the basis for the sample size determination (Krejcie & Denscombe, 1998). Morgan, 1970; Stratification systematic random and sampling were utilized to identify and select housing apartment types available in each estate, based on number of bedrooms and their matching proportion in each estate.

Only the heads of household, irrespective of their gender, were objectively designated to respond to pre-tested questionnaire items pertaining to the number of persons and occupants' marital status in each apartment. Respondents were required to indicate changes in home ownership (tenure) through third-party purchase from original allottees or those who have purchased from original allottees.

The head of household is the person generally regarded by occupants of the apartment as being in charge. This approach helped to minimize any biases.

Ordinarily, household composition is known to change over time. However this study is taken as a snapshot of the present situation in the apartments chosen for the research. According to Yeom (2018) a decrease in the population of low-income groups in a neighborhood is considered as a typical evidence of gentrification.

### 4.0 Results and Discussion

In this study, crowding computation was done with reference to the Canadian National Occupancy Standard (CNOS) and the equivalized crowding index (ECI). Number of occupants were derived from adult-equivalent computation. Descriptive statistical tools were deployed to analyze the data.

Of the 582 questionnaires distributed only 175 were considered useful for further

analysis after discountenancing the defective ones. This constitutes 30% effective return rate. Among the returned questionnaires, households belonging to the group who owned their apartments were 49.7% (87) while households who rented their apartments constitute 50.3% (88) (Table 1.0).

Among the owner-occupiers, mode of ownership was measured as (i) original allottees from LSPDC at the beginning (ii) purchased from previous private owners; that is, households who bought their apartments from allottees or from those who had earlier brought from allottees or other previous owners as the case may be. The results are shown in table 1.

Table 1. Ownership structure of LSDPC's maultifamily apartments

Ownership structure of	No of	Percentage		
apartment	Respondents			
Owned by the household	87	49.7		
Household rented the apartment	88	50.3		
Total	175	100.0		

In the context of this study, renters were not regarded as gentrifiers, hence information from these respondents was isolated and discountenanced. However, the revelation from Table 1 is that being an owner-occupier (49.7%), does not differ significantly from being a renter-occupier (50.3%).

Households in the second category (those that purchased from previous private owners) were isolated and described as gentrifiers while their apartments were referred to as gentrified apartments. Conversely, households in the category (original allottees from LSDPC) were labelled as those that were not gentrified. Their apartments were therefore classified as non-gentrified apartments. Altogether, original allottees and those who re-purchased from original allottees were targeted for data gathering.

In terms of crowding and gentrification, Table 2.0 provides the relevant data showing that only 35.6% (31) were gentrified, while 64.4% were not. Looking at Tables 1 and 2, it can be deduced that only 17.7% of the apartments in the estates selected were gentrified, while 32.0% were not gentrified. Having identified the gentrified apartments and the non-gentrified apartments, it becomes possible to establish the crowding levels,

for purposes of comparison and speculating the implications for policy.

As earlier pointed out, computing the levels of crowding was achieved by applying the Canadian National Occupancy Standard (CNOS) and the equivalized crowding index (ECI). These are measures that have been internationally accepted and adopted by several countries because they meet acceptable norms regarding household housing circumstances.

Table 2. Crowding according to mode of ownership of LSDPC's apartment

Mode of ownership of apartment	No of Respondents	Percent
Originally purchased from LSDPC	56	64.4
Purchased from previous private owners	31	35.6
Total	87	100

Table 3. Designed occupancy and actual crowding during use

		Type 1 (2-bedroom) At Abesan	Type 2 (2-bedroom) at Dolphin	Type 3 (3-bedroom) at Abesan	Type 4 (3-bedroom) at Iba	Type 5 (3-bedroom) at Dolphin	Tyne 6
Original allottees from LSPDC from	Crowding		5.25	2.8	2.0	3.71	
beginning	Designed occupancy		7.0	8.75	8.75	10.5	
Households who purchased	Crowding	2.0	2.88	2.54	5.17	4.13	
apartments from allottees or other previous owners	Designed occupancy	7.0	7.0	8.75	8.75	10.5	

Thus, in the present study, data about number, age, gender and relationships of usual residents in both gentrified and nongentrified apartments were extracted and used to assert the adult equivalent status of the household. The existing floor plans were used to determine the optimal occupancy each apartment was designed to accommodate (Table 3). Similarly, data questionnaire revealed the from the optimal household crowding during usage for both gentrified and non-gentrified apartments. As stated earlier (Table 2), owner-occupied 35.6% of all the multifamily apartments covered by this research have been gentrified.

The minimum crowding level during habitation in gentrified apartments can be found in type 1 (2 bedroom) apartment at Abesan estate with 2.0 persons; while the maximum crowding level can be seen in Type 4 (3-Bedroom) apartment at Iba estate with 5.17 occupants. As could be noticed, the design occupancy showing the expected maximum capacity rating ranges from a maximum of 7.0 persons for apartment type 1 (2-bedroom) at Abesan estate and type 2 (2-bedroom) at dolphin. The maximum rated capacity of 10.5 persons is seen in type 5 (3-bedroom) at dolphin estate. Generally, all gentrified apartments exhibit less than 50% occupancy based on the rated capacity by design, except Type 4 (3-bedroom) at Iba estate that reveals an occupancy of 59.1% of its rated capacity.

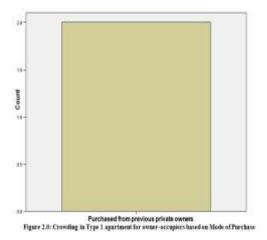
This trend is not significantly different for apartments belonging to original allottees. The minimum occupancy of 2.0 persons is experienced in type 4 (3-bedroom) at Iba

estate, while the maximum occupancy of 5.25 persons is seen in type 2 (2-bedroom) at dolphin estate which is about 75.1% of its rated capacity by design.

Generally, crowding outcome using number of habitable rooms criteria shows that all the gentrified apartments covered by the study were under-occupied, in the same way as the non-gentrified apartments. This tends to suggest that gentrification does not happen with threats of overcrowding or neighborhood population adjustment. This is critical for policies that address demographic issues and their impacts in the urban residential context.

The variability of crowding experiences among the six apartment types investigated in this study was also considered by grouping all occupants in each household into three categories. These are: households that harboured 1-2 adultequivalent occupants; (ii) households that harboured 3-5 adult-equivalent occupants; (iii) households that harboured 6 or more adult-equivalent occupants. The groupings were indicative of the intensity of crowding in each apartment type during habitation. The groupings were used as a basis for understanding and interpreting variations in crowding in various apartment types of LSDPC's multifamily apartments, during habitation. Figures 2 to 7 illustrate the actual occupancy during habitation, based on the mode of purchase of apartment.

Household size of 3-5 persons was the dominant in each of the six apartment types whether gentrified or non-gentrified. This is consistent in all the locations.



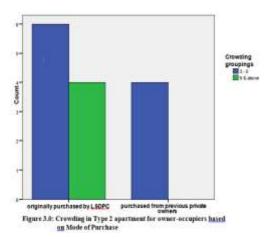
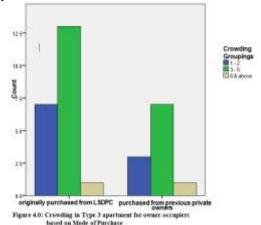
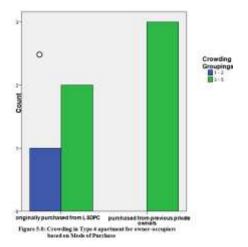


Figure 2 shows that the total number of occupants in Type 1 (2-bedroom) at Abesan ranges from three to five persons. This is the only apartment type among the six studied that does not harbour "1-2" ocupants or "6 and above" occupants. Again, all the available apartments in this category at this location have been gentrified. All the current owners purchased their apartments from previous private owners.

Figure 3 shows that residents of Type 2 (2-bedroom) at Dolphin comprise those who were original allottees from LSDPC and those who purchased from previous private owners (gentrified). In both cases, the dominant occupancy is 3-5 persons per household. In fact, this is the only household size available in the gentrified apartments. Household sizes of 1-2 persons were completely absent while households of 6 persons and above were the least and only noticeable in a few apartments belonging to the original allottees.

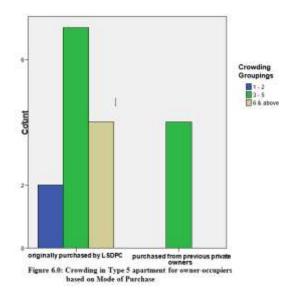
A11 the three household sizes were available in Type 3 (3-bedroom) at abesan (Figure 4). this apartment type also contains both those who originally purchased theirs from LSDPC and those who purchased theirs from previous private owners (gentrifiers). It is noteworthy that households that harbor 3-5 persons were the most dominant, irrespective of mode of purcha





Figur 5 reveals the presence of apartments that are gentrified and those not gentrified. Only two sizes of households were visible. These are households of 1-2 persons and households of 3-5 persons. Households of 1-2 persons were few and restricted to apartments belonging to original allottees. In all apartments, households containing 3-5 persons were the most dominant. It is interesting to note that this is the only household size available in all gentrified apartments of Type 4 (3-bedroom) at Iba.

The situation in apartment Type 5(3-bedroom) at Dolphin was not substantially different from what obtained in Type 4 ((3-bedroom) at Iba. Figure 6.0 shows that only household sizes of 3-5 persons were living in gentrified apartments, and was the most dominant in the apartments belonging to households that were not gentrified. Households containing 1-2 persons and apartments harbouring six persons or more were only available in non-gentrified apartments.



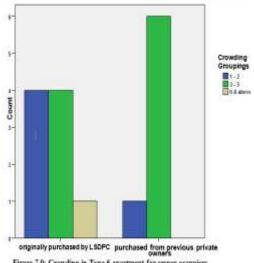


Figure 7.0: Crowding in Type 6 apartment for owner-occupiers based on Mode of Purchase

As shown in Figure 7, all the three household sizes were available in Type 6(4-bedroom) at Ebute-Metta. However only households of 1-2 persons and 3-5 persons were available in gentrified

apartments. It is evident that apartments containing 3-5 persons were the most dominant.

Over all, it could be noticed that household sizes of 3-5 persons were the most dominant in each of the six apartment types, whether gentrified or non-gentrified. However, in terms of spread, 3-5 persons per gentrified apartment constitute 100% of the sampled group in four apartment classifications. These are: Type 1 (two-bedroom) at Abesan, Type 2 (two-bedroom) at Dolphin II, Type 4 (three-bedroom) at Iba, and Type 5 (three-bedroom) at Dolphin II.

Generally, apartments containing 1-2 occupants were not noticed in Type 1 (two-bedroom) at Abesan and Type 2 (two-bedroom) at Dolphin II, indicating an interesting trend that runs contrary to natural expectations that 2-bedroom types should harbour more of 1-2 occupants. The highest number of 1-2 occupants (33.3%) can be found in Type 3 (threebedroom) at Abesan and Type 4 (threebedroom) at Iba among the original allottees. One possible explanation is that most of the allottees may be in the emptynest stage in their life-cycle. Persons in this age bracket can face different living arrangements ranging from empty-nest to generational mix of grandparents, parents, grandchildren, and even great grand children.

On the other hand, gentrifiers are speculated to be owner-occupiers in a younger age group with family formation comprising a couple and few children. This tends to agree with Ley's

postulations that gentrifiers are largely younger, childless and well-educated professional workers (Hochstenbach and Musterd, 2017).

### 5.0 Conclusion and Recommendations

This study focused on how gentrification affects crowding in LSDPC's multifamily apartments in the selected estates. As a problem, policies targeted addressing increase or decrease in the population of LSDPC's estates could be supported by evidence from changing patterns of crowding in gentrifying households for different apartment types. By extension, this provides a framework for a policy insight into the scale of crowding dynamics in LSDPC's gentrified apartments.

It is noteworthy that all the gentrified apartments covered by this study were under-occupied in the same way as nongentrified apartments. The study outcome shows that gentrification in LSDPC's multifamily apartments is not a threat factor for overcrowding or population increase. This was evident from the results of grouping all apartment occupants into three groups, where it was observed that household sizes of 3-5 persons were the most dominant, not withstanding apartment type, whether it was gentrified or not. Policy formulators looking gentrification in LSDPC's multifamily apartments should also pay attention to the fact that gentrifiers are from a younger age group of persons comprising a couple and few children.

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