

THE PULL FACTORS OF INTRA-URBAN RESIDENTIAL MOBILITY IN CALABAR, NIGERIA

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Abstract

The principal objective of this study is to identify the major dimensions of the pull factors of residential mobility in Calabar, Nigeria. The data used in the study were generated from a comprehensive questionnaire survey involving 869 households in the study area. The Principal Component Analysis (PCA) was used to resolve the eleven factors identified into their basic dimensions. The result of the analysis shows there are four components of residential mobility in Calabar. These are - component one: environmental quality; component two: accessibility; component three: recreation; and, component four: housing quality. The study recommends that these four dimensions collectively circumscribe the pull factors responsible for the dynamics of residential mobility in Calabar. The study then concludes that urban planning should take a critical look at these four factors in order to stabilize households and prevent criss-cross residential movements.

Key words: Pull Factors, Residential, Mobility, Components

Introduction

Intra-urban residential mobility involves changing of residence by urban households. It is an action taken by urban households at the end of a process of self-evaluation or self-audit concerning the congruence or otherwise, of the households' social status on the one hand and the housing they occupy on the other. The decision to move or not, is generally the result of two forces: push and pull factors, which act in opposite directions, but produce the same effect.

Push factors operate to discourage households from continuing to reside in present housing (Animashaun, 2010a) while pull factors enable households to appreciate the incongruence between households social status and the housing which they occupy. Therefore, pull factors act as a generative force, stimulating households to move to another housing deemed more attractive, more comfortable and more befitting than the present one.

In other words, pull factors enable households to evaluate the qualitative inferiority of present housing vis-à-vis the alternative and to estimate the opportunities to be gained in the new housing.

The nature and method of operation of pull factors vary from city to city in accordance with differences in culture and taste as well as the quality and quantity of available housing stock. This paper, therefore, is concerned with a critical look at the pull factors of intra-urban residential mobility in Calabar, Nigeria.

The Problem of Study

In Calabar, Nigeria, empirical studies confirm that a large proportion of the residential housing stock is of poor quality (Animashaun, 2010 b). It has also been shown that the housing environment in most of the residential neighbourhoods is poor (Animashaun, 2007). By implication, therefore, most of the residential neighbourhoods are broadly similar in terms of their quality. In these circumstances, therefore, it would be of interest to try to understand the operation of pull factors in intra-urban residential mobility in Calabar, Nigeria. Such an attempt would lead to the discovery of the underlying dimensions of the pull factors.

Objectives of Study

The major objective of this study is to identify the major dimensions of the pull factors of residential mobility in Calabar, Nigeria. The specific objectives of the study are as follows:

- 1) to identify the pull factors that are of relevance to intra-urban residential mobility in Calabar;
- 2) to discern statistically the underlying dimensions of the factors; and
- 3) to examine the relative importance of each dimension discerned in the factors which initiate the process of intra-urban residential mobility in Calabar, Nigeria

Research Hypothesis

The research hypothesis tested in this work is that the pull factors of intra-urban residential mobility in Calabar have discernible underlying dimensions which are comparable with those of western cities.

The Study Area

Calabar is an old, but fast urbanizing town in Nigeria. It has a well-structured spatial pattern of land use in which the residential land use is the most prominent and occupies up to 60 per cent of total built-up area. However, the residential land use itself is poorly structured. It consists of a reckless mix of housing of various qualities. In many of the residential neighbourhoods, modern houses built with cement block walls, having single or multiple storeys and with good finishing are interspersed with poor houses built with mud and thatch. Because of this reason, the housing environment itself could be said to be monotonously uniform across several residential neighbourhoods.

This characteristic spatial pattern of residential landuse is a concomitant of the historical development of Calabar. From its origin, Calabar was made up of several native townships, such as Duke Town, Henshaw Town, Big Qua Town, etc., located in close proximity to one another but separated by grooves. The native townships each had its own

nucleus (either a shrine or market) around which were residential compounds built with mud walls and thatched roofs.

The colonial administration came to superimpose Western type of architecture in the interstices between the native townships. Today, modernization brought affluence to the middle and upper classes, mostly immigrants and these groups of economically successful people continue to build residential houses of various grades of quality in erstwhile vacant spaces. This type of arrangement implies that a residential housing could be of high qualitative rating, possessing all the desirable internal user amenities but situates in a poor environmental setting. So many modern residential housing units as well as old compound type of housing in several of the neighbourhoods have no direct access to a street and their occupants must have to pass through winding footpaths to get into their dwelling. Such is the spatial pattern of residential housing, which makes one to seek to know how effective and efficient the pull factors could be in stimulating intra-urban residential mobility in Calabar, Nigeria.

Conceptual Framework and Literature Review

The study of intra-urban residential mobility could be seen as an extension of studies in human migration. Wolpert (1966) was among the early exponents who explained migration as an adjustment to environmental stress. This explanation was later corroborated by Brown and Moore (1990), and it is today, quite relevant to an understanding of intra-urban residential mobility. Intra-urban residential mobility is a positive response to incongruities between an urban household's social status and the quality of housing it occupies. It is a radical action against mismatch of household and housing.

A household could experience stress in many forms: stress could come from the housing itself in terms of non-suitability of its structure, poor aesthetic and environmental quality, inadequacy of its internal user amenities or the quality of neighbours. Households which can afford the price try to move away from such deteriorated residential areas, neighbourhoods infested with socially undesirable people and nagging neighbours. Households move in order to enhance their social status and to be with a greater number of persons which are already like themselves. This reason finds support in the theories of urban ecology and social area analysis that similar people tend to reside together in the same neighbourhood of the city.

One reason for residential move is, thus, to escape from an increasing number of neighbours with dissimilar character. But in addition, households move to residential neighbourhoods which afford them the most appropriate opportunities to satisfy lifestyles which they already desire but are unable to actualize in an unconducive housing environment or simply, for hedonic reasons (Megbolugbe, 1989).

Intra-urban residential mobility is hardly a static phenomenon. Bourne (1981) put this fact in a model whose dynamics are explained by the hierarchy of human needs (Maslow, 1943). According to Aguda (1994), man may first and foremost, look for safety and security in his housing. Thereafter, he may seek to satisfy his self-esteem and self-actualization. However, there has not been a satisfactory universal specification of human needs. This happens because the needs take extremely diverse forms from one culture to another, and even within the same culture, from one group to another (Megbolugbe, 1991), and from one time period to another.

At the micro-level, availability or non-availability of user needs such as the kitchen, the bathroom, play spaces and other institutional facilities would definitely provoke different reactions from one person to another. Even at some future time, the same person may react differently in response to specific but changing needs. Therefore, the evaluation of residential environments by urban households as congruent or incongruent is a behavioural problem, subject to cultural differences and individual idiosyncrasies. People hardly behave or react as expected of them in terms of group membership such as social class, stage in life cycle, ethnic origin or culture. But they behave according to individual priorities which make people in the same social class react differently to the same situation.

In summary, the pull factors of intra-urban residential mobility act to relieve the household of stress arising from its present housing and environment. On the long run, the reactions of individual households to the pull factors produced a sorting of households in the city into what becomes ecological environments in the conception of social ecologists and social area analysts. In this sorting process, the culture of the movers and their behavioural peculiarities play very important roles.

Method of Study

The data used in this study are extracts from a detailed questionnaire survey of the residential history of 838 households in Calabar, Nigeria. In the questionnaire, households were asked to list in chronological order the addresses of the houses where they had lived in Calabar up to date and to provide the attractions each house offered them before moving in, but which the previous house lacked. These attractions are, therefore, the pull factors.

The administration of the questionnaire adopted a systematic random sampling procedure. In each residential neighbourhood, the existing streets were used as transects. Residential houses along both sides of each transect were identified by the numbers allotted them by the municipal government.

Along every transect, the first house sampled was picked randomly with the aid of random number table. Subsequent selections of houses sampled were done at intervals from the first selection by skipping two houses and picking the third one until both sides of each transect were covered. Non-residential buildings such as a church, mosque, school, etc. were excluded from the questionnaire administration. The household head was mostly the respondent except when he could not be reached. In that case, his spouse stood in for him.

Method of Data Analysis

The analytical problem to be solved is classificatory in nature. The goal of the analysis is to compress the identified influential variables into groups and consequently find a suitable new variable which adequately represents each group of variables. The most suitable techniques for this task is principal component analysis (PCA). The technique of PCA is quite efficient in handling problems of this nature (Udofia, 2003; Hair, et. al, 2003: 601). Ayeni (1979:135-6) provides a catalogue of the various applications of PCA in geography.

As a method of data reduction, PCA is able to collapse groups of variables measured over n areas to r by n components or dimensions in such a way that these components still preserve most of the original variance of the m variables. Not only are the variables reduced in number but the independent components that result from the exercise can be interpreted by looking at the factor scores.

Data Presentation

Table 1 depicts some of the characteristics of households' residential mobility in Calabar, Nigeria. Out of 838 households interviewed, 747 or 89.1 per cent of them had changed their residence at least once since they lived in Calabar. In all, 91 households or 10.9% of total did not provide any responses concerning their residential mobility.

Table 1: Frequency of Household Residential Movement in Calabar, Nigeria

FREQUENCY OF MOVES	NUMBER OF HOUSEHOLDS INVOLVED	PERCENTAGE OF TOTAL
1	336	40.1
2	321	38.3
3	88	10.5
4	1	0.1
5	1	0.1
Sub-total	747	89.1
No response	91	10.9
Total	838	100.0

Source: Author's Fieldwork, 2010

From the 747 households (89.1%) which responded, 336 (40.1%) had moved only once, 321 (38.3%) had moved twice. Table 1 further indicates that more than two moves is not significant. A clearer picture of the residential moves could be appreciated when the households' length of stay in Calabar is considered (Table 2). Out of the 674 households who provided information on their length of stay in Calabar, 173 (25.7%) had stayed for not less than 10 years. By implication, more than 74 per cent of the households had lived for more than 10 years in Calabar. In fact, 18 per cent of the households had lived in Calabar for 30 to 50 years. This residential mobility behaviour in Calabar contrasts that of households in urban America and Britain (Simmons, 1974; Bourne, 1981).

Table 2: Households' Length of Stay (years) in Calabar, Nigeria

S/n	Length of Stay (in years)	Frequency of responses	Percentage of total	Cumulative percentage
1	5	101	15.0	15
2	10	173	25.7	40.7
3	15	69	10.1	50.9
4	20	90	13.3	64.2
5	25	55	8.2	72.4
6	30	65	9.6	82.0
7	35	29	4.4	86.4
8	40	29	4.3	90.7
9	45	17	1.6	92.3
10	50	17	2.5	94.8
11	50+	35	5.2	100.0

Source: Author's Fieldwork, 2010

Data Analysis

Eleven variables were identified in the literature (Brown and Moore, 1970; Kumar, 1989 and Human Rights Watch, 2007) and during reconnaissance survey (Table 3). These variables were then incorporated into the study as the pull factors of residential movements. The respondents were requested to rank these factors according to their relative gravitating abilities on the household. The ranking was done in a descending order such that the most powerful factor scored 11 points while the least powerful factor scored unity. These scores were then aggregated and subjected to PCA because the major objective is to resolve the eleven factors into their basic dimensions. As a first step, the data were subjected to simple correlation analysis so as to see if any one among the variables intercorrelated. The result showed that the variables are somehow independent of one another.

The next stage in the analysis was the computation of communalities (Tables 3). Ten of the eleven variables have communalities which are greater than 0.50, and hence, 10 variables are significantly relevant in the analysis. Table 4 depicts the eigenvalues and the components extracted. Four components were extracted, which jointly explained 59.74 per cent of total variance. Component one explained 17.99 per cent of total variance. Components two, three and four accounted for 15.23, 14.65 and 11.87 of total variance respectively.

The rotated component matrix (Table 5) shows that component one loads very significantly high and positively on two variables: aesthetic look of the residential building (8) and clean and noiseless environment (9) but negatively high on availability of public transit (4). By implication, this component points to the high class residential areas which usually possess these environmental qualities. Therefore, component one can be called environmental quality dimension. The gravitating power of nice-looking houses, set in a background of noiselessness and cleanliness cannot be over-estimated. However, it is a wish for so many households because of transit problems and affordability in terms of house rent. Such houses are usually to be found in parts of the city too remote for households who do not own automobiles and the rents are often beyond the reach of poor households.

Component two loads positively very high on access to shopping (6) but negatively very high on the modernity of the new home (3). Modern form of houses are usually far from market places (often in central city) since they have a tendency to be located towards the peripheral areas where land is available. Component two could, therefore, be said to be accessibility dimension. Distance to shopping or market place is a critical factor in the residential location decision-making of households which own no car. Eni (2005) had also pointed out the significance of distance in the residential location preference of University of Calabar off-campus students.

Table 3: Communalities of Pull Factors of Intra-Urban Residential Mobility in Calabar

S/n	Variables	Initial	Extraction
1	Build own house	1.000	.852
2	Access to work and/or market place	1.000	.536
3	The modernity of the home	1.000	.687
4	Availability of public transit facility	1.000	.659
5	Adequacy of the number of bedrooms	1.000	.554
6	Accesses to shopping	1.000	.525

7	Fixtures and amenities within the home	1.000	.593
8	Aesthetic look of the residential building	1.000	.553
9	Clean and noiseless environment	1.000	.633
10	On-site recreation facilities	1.000	.594
11	Low house rent	1.000	.384

Source: Author's fieldwork, 2010

Table 4: Eigenvalues and Total Variance Explained by Pull Factors of Residential Mobility in Calabar

Component	Extraction sums of square loadings			Rotation sum of squared loadings		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	2.385	21.679	21.679	1.978	17.985	17.985
2	1.854	16.850	38.529	1.675	15.225	33.209
3	1.242	11.287	49.815	1.612	14.656	47.865
4	1.091	9.921	59.737	1.306	11.871	59.737

Source: Author's fieldwork, 2010

Table 5: Rotated Component Score Coefficient Matrix of Residential Mobility Pull Factors in Calabar

S/n	Variables	Component			
		1	2	3	4
1	Build own house	-.205	-.239	-.641	.131
2	Access to work-and/or market place	.029	.287	.178	-.326
3	The modernity of the home	.087	-.586	-.128	.069
4	Availability of public transit facility	-.511	-.040	.005	.423
5	Adequacy of the number of bedrooms	-.457	.008	-.010	-.142
6	Accesses to shopping	-.187	.751	-.356	.318
7	Fixtures and amenities within the home	-.160	-.012	.023	-.573
8	Aesthetic look of the residential building	.721	.084	.092	-.012
9	Clean and noiseless environment	.604	.101	-.173	-.090
10	On-site recreation facilities	.211	-.438	.653	.104
11	Low house rent	.165	-.189	-.350	.036

Source: Author's fieldwork, 2010

Component three loads very high on the variable, on-site recreation facilities (10) but negatively high on the variable, build own house (1). Component three called recreation component seems to be a surprise in this instance because it could never have been suspected as a pull factor in an urban culture such as in Calabar which does not so much value recreation. The negative relationship of 'on-site recreation facilities' with 'build own house' explains the fact that when people build their own houses, they hardly ever think of recreation facilities because they scarcely take part in recreation.

Component four loads very high on fixtures and amenities within the home (7). This component may be appropriately named housing quality dimension. Locating households would want to examine the number of rooms in the building which they intend to occupy. They would also like to assess facilities such as the kitchen, the toilet and the bathroom with respect to their types and relative location in the building which they intend to occupy. These are some of the attributes which determine the liveability of a house and which have the power to pull households out of housing accommodation which lack these qualities.

Results and Discussion

The fore-going analysis demonstrates that the pull factors of intra-urban residential mobility in Calabar, Nigeria polarize around four fundamental dimensions: environmental quality, accessibility, recreation and housing quality. This confirms the hypothesis for this study. Each of these dimensions consists of composite variables which correspond to the ones established in the literature for both European and American urban households.

However, some social and security related variables which are critical in the explanation of intra-urban residential mobility in Western and American cities are either dormant or inactive in the case of Calabar, Nigeria. For instance in Western cities, intra-urban residential mobility may be motivated by the need for social segregation, or the need to avoid undesirable neighbours with dissimilar character. Furthermore, the need to satisfy a desired lifestyle which is not being permitted by the present housing location or its environment can pull households to new housing. Also, households in Western cities can be pulled out of their present housing by the need to enhance their social status. Even though some of these factors operate in Calabar, they are not strong and significant explanation for a majority of the intra-urban residential movements observed in this study. These observations lend credence to the assertion made above that pull factors operate in varying forms from one city to another in accordance with differences in culture and taste.

Conclusion

This study should, however, be seen as exploratory. More researches on the problem of intra-urban residential mobility should be required over a wider coverage for the purpose of establishing a generalization on the observation. Urban planning consequently needs to take a critical look at these influential factors in order to stabilize households and prevent criss-cross residential movements.

Recommendations

In the fore-going analysis, the list of 11 variables representing the factors which pull urban households out of their residence were conveniently reduced to four underlying dimensions: environmental quality, distance to activity area, availability of recreation facilities and housing quality. This exercise has thus reduced the complexity in explaining urban residential movements to simple and easily comprehensible constructs. Therefore, the study recommends that these four factors collectively circumscribe the factors responsible for the dynamic nature of residential activity in Calabar, Nigeria.

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