Crime and Choice of Residence in Enugu, Southeast Nigeria: A Non-Parametric Analysis

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Abstract

Urban residential patterns are influenced by individual and family choices and preferences of housing locations. The economic, socio-cultural and physical environmental features of urban residential pattern may have some implication for type and rate of occurrence of crime and the reaction of residents to it as regards to where they choose to live. This study investigates the effect crime has on households choice of residential location decision in Enugu. Crime data from Nigerian police record and 400 questionnaires distributed to residents of Enugu were used for the study. This study showed that crime incidence is lowest in the medium density neighbourhoods of Enugu. Crime rate, rent and income are the major factors considered by households while taking decision on residential location in Enugu. The study also showed that awareness of crime in neighbourhood is associated with household choice of place of residence. Crime rates need to be reduced in all neighbourhoods to ensure even development of the urban space.

Key words: crime, crime rate, crime occurrence, residential choice

1. Introduction

Nigerian cities are witnessing an upsurge in crime. Crime and insecurity are among the factors that threaten quality of life and social and economic stability. Crime does not allow for sustainable development. Crime has been referred to as a violation of criminal law which its formal penalties are applied by some government authority. It also offends the morality of society, or violates the divine law. Nigerian newspapers report one form of crime occurrence or another on a daily basis.   According to Ahmed (2012), crime occurrence in Nigerian cities have shifted from simple crime such as stealing, burglary, rape etc to more sophisticated crime of terrorism, kidnapping, child trafficking etc. The environmental, social health and economic ramifications of this situation in our cities have tremendous impact on urban economy and security (Ogboi 2009).

It is assumed that high level of crime in a neighbourhood could constitute an obstacle to the development of that area. This may be because of the fear of crime which also may increase the rate of uneven development within and between the area and other areas. This seriously undermines development efforts of both governments (Federal, State and Local) and individuals. The situation may equally result to increasing residential relocation and decreasing neighbourhood satisfaction. This will adversely affect neighbourhood development.

Urban residential patterns are influenced by individual and family choices and preferences of housing needs, finance capabilities and existing housing market manipulations. The various socio-economic, socio-cultural and physical environmental features of urban residential pattern may have some implications for and impact on the types as well as the rate of occurrence of crime and the reaction of residents to it as regards to where they choose to live. Studies have been carried out on the relationship between crime and choice of residential location in developed countries (Cullen and Levitte 1992; Taylor 1994; Moreoff and Samson 1997; Jargowsky and Yoonhwan 2009). In Nigeria, little or no effort has been made in this direction. Existing studies are on crime rate and the effect of crime on property value (Ekpeyong 1989; Afon 2001; Otu 2010) and patterns of violent crime in urban areas (Agbola 1997 and Ahmed 2012). Enugu the capital of Enugu state in Nigeria has been experiencing rise in crime. This study investigates the effect crime might have on households choice of residential location decision in Enugu. This is done by obtaining the incidence of different crimes within the city. The study also used non parametric analysis to ascertain the relationship between crime and choice of residence and the type of crime that most influence this decision.

2. Methodology

This research was carried out in Enugu a city with an estimated population of 787196. It is located in the south eastern part of Nigeria about 200 kilometers from the Atlantic coast.   It occupies about 90 square kilometers. Enugu is the oldest city in south eastern Nigeria. It represents a typical example of a rapidly growing state capital in Nigeria. It is an administrative town with a high population of literate residents. Residential land use takes the lion share of existing land use in the city.

The research was carried out using survey method. Both primary and secondary data were utilized in the research. Secondary data was collected from the State Police Headquarters Enugu (Criminal Investigation

Department). Data collected from this source covered 2000 to 2011, a period of twelve years. Criminal data from this source was categorized into two; offences against persons and offences against property. Offences against persons consists of crime such as murder, assault, rape and indecent assault, kidnapping etc, while crime against property includes armed robbery, theft and other forms of stealing, burglary, housing breaking, arson, etc.

A questionnaire with 28 questions was distributed to selected neighbourhoods in Enugu. The questionnaire was designed to elicit information from respondents on crime and its influence on choice of residential location. Neighbourhoods were first stratified according to housing density (low, medium and high). Four high, two medium and two low density neighbourhoods were randomly selected from the list (50%). Three streets were also randomly picked from each selected neighbourhood. A total of 440 questionnaires were distributed in the selected streets as follows: Two hundred and thirty questionnaires in the high density, one hundred and forty in the medium and seventy in the low density neighbourhoods. The number distributed was based on household population in each density. Out of the 440 questionnaires distributed in the city, 300 were used for the study (143, 107 and 50 for the high, medium and low density areas respectively). Data collected was analyzed, using descriptive statistics (mean and standard deviation). Chi square was used to assess the relationship between types of crime that occurs in a neighbourhood and choice of residence. These were done using SPSS 15.0 version
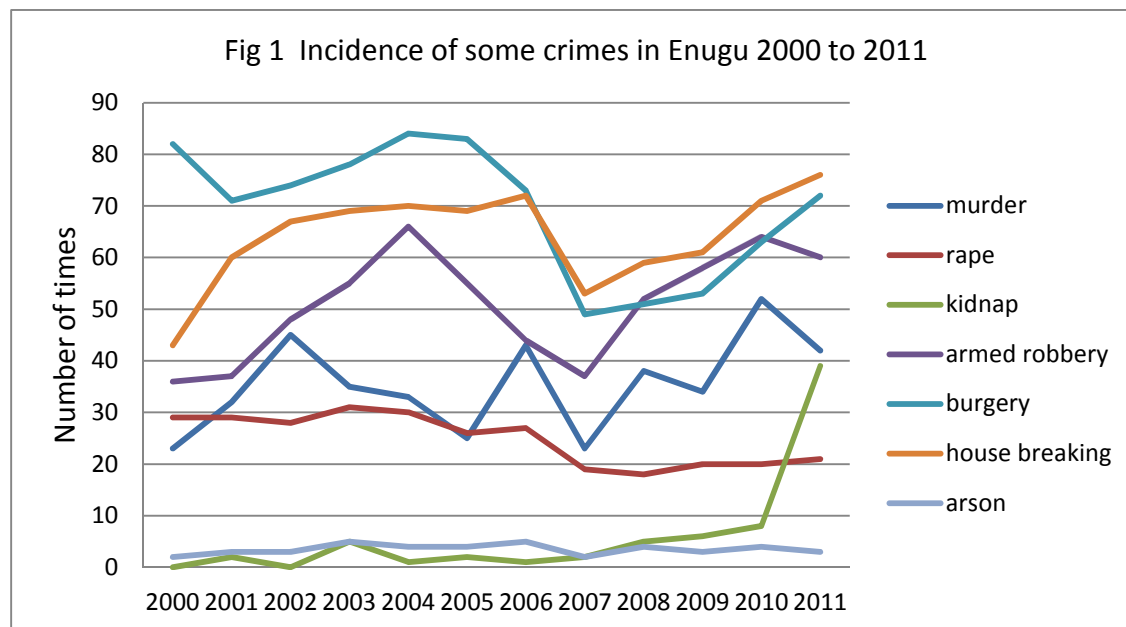
3. Results and Discussion

Table 1. and fig. 1 shows descriptive statistics and graphical representation of major crimes in Enugu from 2000 to 2011. The table shows that offence against persons (assault) had the highest occurrence peaking in 2003 (437cases) with a mean of 380, standard deviation of 51. Theft and other stealing had the highest occurrence for crime against property for the 12 years with a peak in 2004 (387cases), mean of 336.33 and standard deviation of 60.47. Crime of kidnap has been on the increase in the last 12 years under study. The low density areas have the highest incidence of kidnap. This may be as a result of high ransom paid before each kidnapped victim is released thus making kidnapping lucrative. That may be the reason why kidnap is one of the crimes feared by low density residents as shown on table 6.
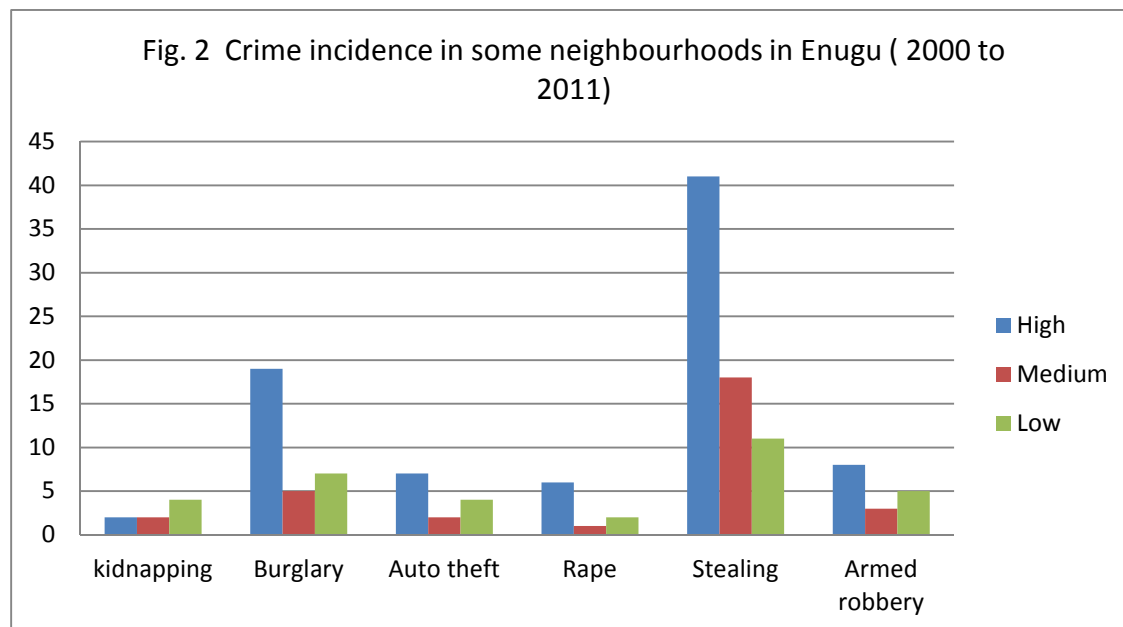
Table 1. Descriptive statistics of some crime incidence in Enugu from 2000 to 2011.

Descriptive Statistics

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Murder	12	23	52	425	35.42	9.100
Assault	12	288	437	4570	380.83	51.849
Rape	12	18	31	298	24.83	4.840
Kidnapping	12	0	39	71	5.92	10.723
Other offences under offences against persons	12	61	84	902	75.17	8.505
Armed robbery	12	36	66	612	51.00	10.583
Theft and other stealing	12	200	387	4036	336.33	60.471
Burgery	12	49	84	833	69.42	12.573
Housebreaking	12	43	76	770	64.17	9.360
Arson	12	2	5	42	3.50	1.000
Other offences under offences against property	12	59	82	876	73.00	7.471
Valid N (listwise)	12					

Fig 1 Incidence of some crimes in Enugu 2000 to 2011

 The economic recession in the country might have led to increasing incidence of robbery cases from 2007 to 2011. Armed robbery is usually motivated by criminal intent to material acquisition. According to Otu (2010) in terms of number, the crime problem in contemporary Nigerian society is primarily a problem of armed robbery. Armed robbery in Nigeria is an imitated, learned and borrowed behavior, embellished by learners within the constraints imposed by the socio-milieu. This may also explain the increase experienced in number of murder, burglary and house breaking cases within the same period. All crime types under study occurred more in the high density areas except kidnapping. This agrees with other studies which showed that crime occurs more in areas of high density, overcrowding and economically and socially marginalized areas (Stark 1987, Ludwing et al 2001, Willcox et al 2003). Their studies also showed concentration of crime in the high density areas. This is consistent with the findings of Freeman et al (1996) who noted that crime can be numerous in high density areas because the probability of being caught is low in such areas and criminals creates positive externalities for others and thereby concentrate in such localities. Afon (2001) had similar results in llorin, Nigeria where crime occurred more in high density residential areas. He found particular criminal activities peculiar to certain densities. This he attributed to the varying social and economic attributes of residents as well as environmental characteristics of the residential area. Agbola (1997) also noted that in Lagos, a city in Nigeria, incidence of burglary, armed robbery, street fighting, hooliganism and drug dealing were more in high density residential areas. His study demonstrated that there are notable geographical variations in the pattern of crime location and that these variations differ with respect to type of crime.   Occurrence of some of the crime in Enugu is shown in Fig 1.   It can be seen that crime incidence is lowest in the medium density neighbourhoods as shown in Fig. 2. This is consistent with the findings of Erodogan (2010) who found crime occurrence to be positively related to density. Mukoro (1994) in contrast, reported high rates of violent crime in low and medium density areas of Lagos, Nigeria. His interpretation was that areas where people with high socio-economic status resided recorded higher levels of violent crimes. Closer analysis of his presentation, however, showed that this was not consistently so.

Fig. 2 Crime incidence in some neighbourhoods in Enugu (2000 to 2011)

Source Police Headquarters Enugu (CID) 2012

The socio economic status of the respondents is shown on Table 2.   Most of the respondents had some formal education. Only 6.3% of the respondents did not have any formal education.

Table 2. Socio-economic status

Marital status		Highest Education attained		Age of Respondent	
Single	65	No formal Education	19	Below 30 years	85
Married	170	Primary level	32	30 – 40 years	55
Divorced	2	Secondary level	86	41 – 50 years	77
Widowed	63	Tertiary level	140	51 – 60 years	39
Total	300	Above tertiary	23	Above 60 years	44
		Total	300	Total	300

Source : Field survey 2012

The major types of criminal activities that respondents have experienced directly or indirectly are kidnap, robbery, auto theft, burger, larceny and rape/assault. Table 3. shows the views of residents on reasons for crime occurrence in their neighbourhoods and the urban area. Residents in all the densities see poverty as a major reason for criminal activities in Enugu. For the medium and low densities, 52.3% and 50.6% respectively consider poverty as a reason while 37% of residents in the high density areas consider poverty as reason. Negligence by government is seen as another reason by 25.5%, 24.7% and 23.3% of residents of high, medium and low density areas respectively. Inadequate security in the neighbourhoods is another reason by 9.4%, 11.2% and 4.7% in the high medium and low density areas respectively.   Unemployment is considered a reason by 20.9%, 11.2% and 11.6% of residents in the high, medium and low density areas respectively. The residents do not see lack of concern for their neighbourhood as a major reason for crime occurrence in the neighbourhood.

Table 3. Reasons for criminal activities in neighbourhoods of Enugu.

Density	Reasons for criminal activities				
	Poverty	Inadequate security	Negligence by government	unemployment	Lack of concern by residents
High	145	37	100	82	28
Medium	45	10	22	10	2
Low	45	4	20	10	7
Total	225 (40.3%)	51 (9.6%)	142 (25%)	102 (18.3%)	37 (6.6%)

Source: Survey 2012

In considering neighbourhoods for residence, crime rate, rent, income and building type are some of the main considerations by persons in the high density areas. The medium density residents consider rent and crime rate more while for those in the low density areas, it is rent, crime rate and income. Nearness to friends/ relations and social class are not considered by residents of the high and medium density areas while they are considered by

residents of low density areas. (See Table 4). Molin et al (2003) study of Benelux summarized that regardless of the study area and model specification, accessibility considerations are significantly less important than housing attributes and the attributes related to neighbourhood.

Table 4. Factor considered in choosing residence

Density										
	Rent	Aesthetics	Prestige	Building type	Income	Crime rate	Accessibility	Infrastructure	Nearness to friend/relation	Social class
High	145	21	7	59	63	156	47	30	0	0
Medium	45	10	2	10	2	34	4	8	0	0
Low	44	28	20	10	42	43	17	15	6	24
Total	234	59	29	79	107	233	68	53	6	24

Source survey 2012

The types of crime that most influence residents in choosing residential location are shown on Table 5.. Robbery is considered to influence the choice of residential location by 49.1%, 67.7%, and 43% of residents in high, medium and low density areas respectively. In the low density areas, 37.8% of them consider kidnapping. The Hiscox Group (2001) placed Nigeria on the 6th highest in kidnapping. Kidnapping in Nigeria has been attributed to ethnic militia, bloody politics, unemployment, failure of government to provide basic amenities, dirty politics, traditional rulers and communities encouraging crime and security failures (Akpan 2010) Kidnapping for ransom occurs more in the low density areas in Enugu. The occurrence of rape/indecent assault is considered by many in the high density areas in choice of residence. This may be due to the higher incidence of rape in these areas. See Fig. 2. Rape ranges from highly predictor and harmful stranger perpetuated act to violations between acquaintances or even those romantically involved. In Enugu and most Nigerian cities, rape is under reported due to stigmatization. The incidence of rape in high density areas may be due to the type of buildings common in these densities (tenement) where many households live in a building and share toilet and bathing facilities. Females are mostly the victims of rape/indecent assault. Linden and Rockoff (2008) found that individuals have a strong distaste for living in close proximity to sex offenders.   From the data collected it was found that 61.7% of the respondents have had cause to relocate or move residence because of crime either directly affecting them or in their neighbourhoods, while 38.3% have not had cause to relocate due to crime. The fear of being a victim of crime as shown by Farrel et al (2007) can erode public health and can alter routine activities and contribute to some places turning into no go areas through withdrawal from community, this can drain community cohesion, trust and neighbourhood stability. One of the attributes of residential choice location is security.   Neighbourhoods become obsolete when security deteriorates as security causes value to change and demand for some neighbourhoods change (Katzman 1980; Dugan 1999; Xie and Mc Dowall 2008; Jargowsky and Yoonhwan 2009).

Table 5. Crimes that most influence residence choice

Density						
	Kidnap	Robbery	Auto theft	Burglary	Larceny	Rape
High	24	58	6	28	10	9
Medium	21	70	0	7	3	0
Low	77	89	30	8	0	0
Total	121	216	36	43	13	9

Source survey 2012

  Chi square was used to test the hypothesis which states that there is no significant relationship between choice of residential neighbourhood to live in and type of crime that occurs in the neighbourhood (i.e. that they fear more) .   The result suggests that there is a significant relationship with X^2 (8) = 62.09, (P $\leq$ 0.01. The contingency coefficient was .331. This suggests a medium size effect. The second analysis which was also tested with chi square suggests that a significant relationship exists between residents awareness of crime in neighbourhoods and their choice of residence X^2 (4) = 27.10, P$\leq$ .001. This suggests that residents check out the incidence of crime in a neighbourhood before making decisions on whether to rent or build in that neighbourhood. This is consistent with the findings of Gibbon (2004), Moreoff and Samson (1997) who noted that crime has negative consequences for neighbourhoods including increased mobility and decreased neighbourhood satisfaction. Jargowsky and Yoonhwan (2009) asserted that crime is a major factor for middle-class flight and is a cause of suburbanization.   Gibbon (2004) also found out that spatial concentration of crime

can have dynamic effect driven by household location decision. Fear and direct cost associated with property crime may discourage home buyers, inhibit local regeneration and catalyse a downward spiral in neighbourhood status. High crime rates deter new residents and motivate those who can to move out to lower- crime rate neighbourhoods. Cullen and Levitte (1992) got results consistent with a strong relationship between changes in crime rate and urban flight. They found out that almost all impact of crime on city population results from increased out-migration. Highly educated households and households with children were most responsive to crime. They causally linked rising crime rate to city depopulation.

4. Conclusion

This study has looked at the incidence of some crimes in Enugu. The study showed that since 2007 the incidence of most crimes has been on the increase especially in high density residential neighbourhoods. This result is consistent with results of other studies in developed and developing countries where crime rates are more in high density neighbourhoods. The study also showed that residents of Enugu do consider occurrence of different types of crime in the neighbourhoods before taking decisions on where to live. Some crimes influence this decision more than other crimes. Different crimes influence low, medium and high density residents in their choice of residence. To ensure even development of Enugu and indeed all cities in Nigeria, crime rates especially that of kidnap and house robbery has to be reduced.

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