

Socio-Economic Characteristics of Property Owners and Level of Compliance with Building Regulations in Calabar, South-Southern Nigeria

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Abstract: *The study carried out an examination of the Socio-Economic Characteristics of Property Owners and Level of Compliance with Building Regulations in Calabar. The major types of data obtained for the study were data on the socio-economic characteristics of respondents (owners of buildings), such as income, profession, educational status and level of awareness. These data were obtained from the residents of the area, Cross River State building regulations of 1984 as amended in 1987 and direct measurement of building variables considered for the study. Multiple Correlation Statistical analysis was used to show the relationship between the socio-economic characteristics of owners of buildings and level of compliance with building regulations. The regression models result shows that there is a relationship between level of compliance with building regulations and the socio-economic status of respondents at a level of 20.43 per cent. The model was significant at <0.001 level with an f-ratio of 31.787. From the result of regression coefficients, given a unit increase in income while holding the effects of profession, educational status, and level of awareness constant, level of compliance will increase by 0.135 units. Also if the effect of income, educational status, level of education is held constant and there is a unit increase in profession of respondents, level of compliance decreases by 0.039 unit. Given a unit increase in educational status while holding the effects of income group, profession, level of awareness constant, total level of compliance will increase 0.047 units. In addition, if the effect of income, profession, educational status is held constant, with a unit change in level of awareness, level of compliance with building regulation will increase by 0.459 units. The result shows that the most dominant socio-economic predictor of compliance with building regulations is level of awareness, which has to be improved in Calabar.*

Keywords: *Socio-economic characteristics, property owners, compliance level, building regulations, Calabar metropolis.*

1. INTRODUCTION

Development control is one of the greatest challenges facing the world today. In an effort to contend with the problem, governments of different developing countries have risen to the global challenge by providing regulations, under their respective Town and Country Planning laws, for the maintenance of a well-planned and liveable environment. The Nigerian government is no exception. Taking a clue from her long history and evolution of the problems of gross violations to preceding urban development control schemes, the urban and regional planning decree of 1992 (Decree No. 88) was passed into law (Sule, 2003).

The primary purpose of building regulations is to provide for the health, safety and welfare of people in and around buildings (Oloyede, 2010 and Parker, 2006). Accordingly, the legislative objective of Cross River State planning law under consideration was to ensure a liveable environment by providing standards for approved buildings, location of buildings, types and uses, building lines and setbacks. Others include regulations for spaces around buildings to allow convenient areas for air circulation, services and facilities, built up areas, size of rooms, dimension of ceiling height, ventilation to allow for air circulation, drainage and disposal system, and other building specifications to which all occupiers, users and owners of land are expected to comply. Compliance here refers to building in line with the requirements of the selected provisions of the Cross River State building regulation of 1984 as amended in 1987.

It is observed that despite the good intentions of the law and the efforts of the existing Town Planning Department in Calabar, the rate at which violations persist is high, even in the face of on-going demolition exercises. This is a clear indication also of the persistent weight of the factors that are responsible for the persistent violations. In Calabar, cases abound in which, despite being aware, users and house owners have continued to violate building regulations and specification. This provokes a strong suspicion that unawareness of regulatory requirements of the law alone is not a sufficient determinant of compliance.

Investigating the basic data of respondents' buildings violators in Taiwan, Kuen-Tsing, (2005), looked at the age, education, occupation, monthly income, number of family members. A questionnaire survey was carried out during July and September, 2008. Altogether, 172 building violators were surveyed. The investigation already assumed that the respondents were violators as against the assumption that everyone is innocent until the contrary is proved. Secondly, the data extracted from the violators on age, education, occupation, monthly income and number of family members were data of respondents at the time of questionnaire administration after the violations had occurred (from 1984- 2007 period reviewed by the researcher) rather than data collected for respondents at the time of the building construction when the violations actually took place. The study revealed that the socio-economic characteristics of the respondents influenced compliance to building regulations in the area. Available studies have also shown that certain cognitive factors such as experience, family patterns, tenure system, socio-cultural and economic background, age, sex, values and needs of the people could affect the level of compliance to housing regulations and how they perceive their housing environment (Francescato and Mebane, 1973; Jiboye, 2008 and Onibokun, 1985).

This study, therefore, investigated whether indeed the socio-economic characteristics of property owners affect the level of compliance with building regulation in Calabar.

2. MATERIALS AND METHOD

2.1 Study Area

The city is located in the southern part of Cross River State. It lies between longitude 08⁰ 26 East of the Greenwich meridian and latitude 04⁰ 58 North of the equator and longitude 08⁰22 East. It has a total surface area of 159.65 square kilometres. It is bounded by the great Qua River and Calabar River.

The population of Calabar was 379,605 going by the 1996 population projection. By the 2006 Nigerian population, the population had grown to 461,796 according to Geo Names Geographical Database making its growth rate more than 3 percent. This is not surprising given the uniqueness of the town with a high rate of urbanization especially with its tourism potentials and attractions as Cross River State capital. The density of 134 for 1991 and 293 in 2006 concealed the rather acute situation in Calabar (National Population Commission (NPC), 2006).

The number of buildings on separate stand/yard in Calabar metropolis stood at 15.894 going by 2006, Nigeria's population and Housing census drawn from the thirteen metropolis residential areas being studied. As rightly observed by Ebong (1993), housing has become the thorniest problem facing its inhabitants. In an apparent attempt to contend with the housing problems, houses are springing up in disregard to planning regulations with attendant negative consequences on land use planning. One unique characteristic of the study area is that it is contiguous to the completely built up area in the municipal capital. A greater percentage of building constructions already carried out in Calabar were done without prior access roads. It can be easily observed that more than 50 percent of districts already designated as residential locations are yet to be fully built up. These include settlements and suburbs such as Ikot Ekpa, Ikot Effiom Eyamba, Obot Okoho, Bacoco, Awakada, Adebyo Ikot Omin, Ekaobo, Ikot Nkebre, Ikot Enobong, Ikot Omin, Ine Udo Ndito Okobo, Ine Akpan Ufana, Ine Udo all surrounding the completely built up area but hindered by a near absence of access roads.

The city is currently experiencing a major metropolis growth. Expectedly, metropolis degradation has become one of the phenomenons attracting attention in the city. According to Ebong (1983), Calabar municipality lacks solid economic base. Thus, a wide range of interrelated variables including the peoples annual income, their educational level, occupational distribution, residential

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status and even psychological factors explain the metropolis structure, perception and response to environmental stimuli in Calabar Municipality.

2.2 Types of Data and Source

The major type of data required for this study is data on socio-economic characteristics of respondents (owners of buildings), such as income, profession, educational status and level of awareness. These data were required to establish the relationship between characteristics of property owners and their level of compliance building regulations in the Calabar.

These data were sourced from Primary and Secondary sources. Primary sources of data included questionnaires administered to the residents of the study area and direct measurement of building variables considered for the study while Secondary sources of data included Cross River State building regulations of 1984 as amended in 1987 where data on building regulation provisions were elicited. Also data on existing residential districts that make up the study area were obtained from Nigerian National Population and Housing Census of 2006.

2.3 Procedure and Techniques of Data Collection

Data were collected using seven hundred and ninety four sets questionnaires administered on 794 respondents owners of the five percent of buildings on separate stand measured with the help of trained field assistants. After measurement of each variable the researchers recorded the data on the counterpart part of the questionnaire provided for that purpose.

The population of study was made up of Metropolis Residential buildings/houses on separate stand and their owners in the thirteen residential areas of Calabar Metropolis. There are about 15,894 completed buildings on separate stands in the 13 residential districts of the study area.

Measurement of buildings was done by considering five percent of buildings on separate stand selected using systematic random sampling technique in each of the 13 metropolis residential districts that made up the study area. Copies of the questionnaire were distributed to owners of the buildings measured. From Table 1, out of 794 buildings measured, 742 copies of the questionnaire representing 93percent were successfully retrieved. This number was considered representative enough for the study.

Table 1. Residential districts and number of buildings measured in the Study Area

S/ N	Residential Districts	No. of Buildings	No. of buildings measured/ questionnaire administered.	Questionnaires Retrieved.	Percentage retrieved
1.	Akim Qua Town	2020	101	99	98
2.	Ediba Qua Town	1837	92	82	90
3.	Big Qua Town	2361	118	117	99
4.	Essien Town	1942	97	97	100
5.	Ishie Town	2627	131	112	85
6.	Ikot Ansa	1722	86	73	84
7.	University Satellite Town	750	38	38	100
8.	Ikot Efa	414	21	18	85
9.	Esuk Utan	204	10	10	100
10.	Ekorinim	441	22	22	100
11.	Esuk Atu	240	12	12	100
12.	Nyangasang	720	36	36	100
13.	Edim Otop	616	30	25	83
	Total	15, 894	794	742	93

Source: 2006 Population and Housing Population Data Bank, Nigerian’s National Population Commission (2010).

The sampling technique adopted in this study was multi-stage sampling technique. At stage 1, purposive sampling of residential districts was done, to satisfy the researchers’ desire to study only buildings within the metropolis residential districts which are contiguous to the completely built up area in the Calabar Municipality. The districts so captured include Akim Qua Town, Ediba Qua Town, Essien Town, Ishie Town, Ikot Ansa, University Satelite Town, Ikot Efa, Esuk Utan, Ekorinin, Nyangasang and Edim Otop; secondly, to capture only buildings on separate stand/yard.

Other types of housing unit include; informal improvised dwelling (0.6percent), semi-detached (7.3percent), flat in block of flats (10.4percent), Traditional Hut structure(9.5percent), others (0.4percent). At Stage 2, systematic sampling was done. A sample frame was defined for each street at the interval of 20 buildings according to the number of buildings on separate stand/yard with a target of not less than five percent in mind. Stage 3 involved repeated systematic sampling in districts where the minimum 5percent was not met at first time due to repeated absence or outright refusal to allow measurement or supply needed information by owners of buildings within the frame.

2.4 Data Analysis

The socio-economic variables considered for the study included Annual Income Group, Educational Status, Level of Awareness with Building Regulations, and Profession of owner of building. The compliance level was ranked as shown in Table 2, below:

Table 2. Compliance classification standard

Compliance		
Mean grouping	Ranking	Classification
1 – 59.4	1	Poorest
59.5 – 79.4	2	Poorer
79.5 – 95.4	3	Poor
95.5 – 100	4	Good (Full compliance)

Source: Researcher’s Field Work 2010

Furthermore, Multiple Correlation Analysis was used to show the relationship between the socio-economic characteristics of owners of buildings and level of compliance with building regulations.

3. RESULTS AND DISCUSSIONS

This subsection contains findings from the data drawn from the sampled buildings and the respondents/owners of the buildings on the relationship between level of compliance with building regulations and the socio-economic status of the owners of buildings in Calabar Metropolis. The presented data was elicited from respondents using questionnaires in the aspect of their socio-economic status and direct measurement in the aspects of compliance with building regulations for buildings existing before and after the law was enacted in 1984.

The socio-economic characteristics of the respondents considered included Educational Status, Income group, Level of awareness (with building regulations), Profession. In terms of the socio-economic status of respondents presented in Tables 3-6 in each case except for the professional grouping of respondents (Table 4) the higher the socio-economic status the more compliant the buildings tend to be with the regulations.

Regression models and the regression co-efficient were adopted for the analysis of the data in Tables 3-6. The summary of regression model is presented in Table 7. From Table 7, the result

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shows that there is a relationship between level of compliance with building regulation and the socio economic status of respondents at a level of 20.43 per cent. The model was significant at <0.001 level with an f-ratio of 31.787.

Table 3. *Level of compliance with building regulations factored by Income Grouping of Respondent's in the Study Area*

Annual Income Group	Mean Compliance Level	N	Std. Dev	Compliance Classification
Low (₦146,250 or Less)	71.51	241	21.41	Poorer
Low Middle (₦146,251- ₦578,250)	77.31	156	16.57	Poorer
Upper Middle (₦578,251- ₦1785,750)	84.09	98	10.52	Poor
High (₦1785-751 Or more)	82.78	53	13.40	Poor
Total	76.50	548	18.46	Poorer

Source: Researcher's fieldwork,

Table 4. *Level of Compliance with Building Regulations Factored by Professional Grouping of Respondents in the Study Area*

Was your Profession related to building at the time of building?	Mean Compliance Level	Ranking	N	Std. Dev	Compliance Classification
Non Building Related Profession	77.04	1	564	19.05	Poorer
Building Related Profession	78.77	2	127	17.06	Poorer
Total	77.36		691	18.70	Poorer

Source: Researcher's fieldwork, 2010.

Table5. *Level of Compliance with Building Regulations Factored by Educational Status of Respondent's in Calabar Metropolis*

Educational Status	Ranking	Mean Compliance Level	N	Std. Dev	Compliance classification
Low Level (primary and below)	1	71.47	154	18.64	Poorer
Middle Level (secondary)	2	74.18	169	21.99	Poorer
High Level (tertiary and post-graduate)	3	80.48	458	16.39	Poor
Total		77.34	781	18.56	Poorer

Source: Researcher's fieldwork, 2010

Table 6. *Level of compliance with building regulations factored by Level of Awareness of respondent's in Calabar Metropolis*

Level of Awareness (Building Regulations)	Mean Compliance Level	N	Std. Dev	Compliance classification
Low	54.08	82	29.71	Poorest
Fair	76.19	495	15.06	Poorer
High	87.70	215	12.25	Poor
Total	77.02	792	18.94	Poorer

Source: Researcher's fieldwork, 2010.

Table 7. Summary of Regression Model for the Level of Compliance with Building Regulations in the Study Area.

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.452	0.205	0.198	0.645

Predictors: (Constant), Level of Awareness (Building Regulations), Profession, Educational Status, Income Group
 Dependent Variable: Level of Compliance

Source: Researcher’s fieldwork, 2010.

From the result of regression coefficients, given a unit increase in income while holding the effects of profession, educational status, and level of awareness constant, level of compliance will increase .135 units. Also if the effect of income, educational status, level of education is held constant and there is a unit increase in profession of respondents, level of compliance decreases by 0.039 unit. Given a unit increase in educational status while holding the effects of income group, profession, level of awareness constant, total level of compliance will increase .047 units. In addition, if the effect of income, profession, educational status is held constant, a unit change in level of awareness, level of compliance with building regulation will increase .459 units. The result shows that the most dominant socio-economic predictor of compliance is level of awareness. From the ANOVA result in Table , the f-ratio is 31.79. This f-ratio at 494 degrees of freedom is significant at <0.001. Since, $P < 0.001$ is lower than the 0.05 confidence limit set for the study, the null hypothesis is rejected in favour of the alternative hypothesis, which states that the level of compliance with building regulations varies according to the socio-economic characteristics of owners of buildings in Calabar.

Table 8. ANOVA for the Regression of the Level of Compliance with Building Regulations on Socio-economic Characteristics of Respondents in the Study Area.

	Sum of Squares	df	Mean Square	F	Sig.
Regression	52.964	4	13.241	31.787	0.000
Residual	205.774	494	0.417		
Total	258.737	498			

Predictors: (Constant), Level of Awareness (Building Regulations), Profession, Educational Status, Income Group
 Dependent Variable: Level of Compliance

Source: Researcher’s fieldwork, 2010

4. CONCLUSION/RECOMMENDATIONS

From the results, it is clear that there is a positive significant relationship between socio-economic status of owners of buildings and the level of building compliance with building regulations in Calabar Metropolis. The implication is that the level of compliance with building regulations is determinable by the socio-economic factors of owners of buildings collectively. Apart from the socio-economic status of respondents being the determining factors of compliance, deduce-able also from the above is the fact that the factors weremultiple rather than singular. This further strengthens the Institutional/organizational theory adopted for this study that environmental law compliance factors are rooted in multiple rather than singular factors. Therefore, the concept that environmental Law compliance problem can be approached from singular and one straight-jacketed problem solving approach does not suffice. What this means is that improving compliance in Calabar metropolis requires a comprehensive approach which will involve improving the socio economic status of citizens holistically.

To improve compliance with the regulations, it is therefore not enough that developers are aware of the legal provisions and requirements for standard buildings, their socio-economic status generally, particularly, with regard to income and level and education would have to improve. This means that awareness of regulatory provision alone as earlier indicated by Offiong (2007), is not enough to guarantee absolute compliance required by law. This further justifies the concept

that ignorance of the law is no excuse which the 2007 research sought to refute. From the result of the study, it can be observed that ignorance of the law is not the only reason developers would violate the law. In fact, even if it were, it would not still justify violations of the law, because in the circumstance, ignorance would be a choice and a person should be made to bear the consequence of his own choice. Everyone who intends to embark on a building project ought to know that there are enforcement authorities saddled with the responsibility of law enforcement. Such persons need no reminder that what the authorities enforce is law. It is consequently, the responsibility of individual developers to take steps to find out the requirements of the law because ignorance of the law is no excuse. This is important because there is no one who can truly say that he is not aware of the existence of law, even though he may not be aware of the specific provisions and requirements of the law. While every new law must first be published by the Government, it is not the responsibility of Government if people refuse or fail to know the provisions of the law.

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