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Appraisal of the Lagos State Building Control Agency towards Efficient Service Delivery

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Abstract: The study evaluated the institutional framework of building control practice, identified and examined the degrees of enforcement and compliance with the building control regulation in Lagos State with reference to the promulgation of the Urban and Regional Planning and development Law of 2010. A total of 185 questionnaires were used to elicit data from 72 firms, 33 consultants and 80 personnel of the Building Control Agency in which sixty-three one hundred and seventeen (117), (63.2%) questionnaires were accurately filled and returned. The data collected were analyzed using frequency, percentage and weighted summation. Findings revealed that the agency (LASBCA) undertakes the major role of setting the enforcement system for building projects and private parties' participation were not yet in place. Furthermore on the level of compliance by contractors, result showed that the structural stability and aesthetic appearance of building projects received greater attention. This paper concludes that the practice of Building Control to a large extent has the prospects of enhancing the quality of building project delivery but detailed program of work should be submitted along with other necessary document before approving commencement of work on site so that every stage of work could be adequately captured in the study area.

Keywords: Building Control Practice, Building Regulation, Enforcement, Compliance, Building Control Agency

I. Introduction

Varieties of buildings play a substantial role in environmental health, human welfare and economic stability of a nation or society [1,2] and this has made it essential to have official rules, regulatory controls and standards to govern their design, construction and operation. But surprisingly, the building industry in recent years has witnessed the spate of building collapse and failure and this incidence has become major issues of concern in the development of this Nation as the frequencies of their occurrence and the magnitude of the losses in terms of lives and properties are now becoming very alarming [3,4].

Moreover, recent studies on the occurrence of building collapse have shown that the consequences of an ineffective and non-operational National Building Code in social and economic terms are so monumental for any sane society to ignore because more than 70% of the reported cases of building collapse in Nigeria stemmed from the informal sector [5, 6]. And from a total of 91 cases of building failures/collapse in Nigeria between 1974-2010; 51.6% occurred in Lagos State and the consequences of building collapse has been colossal with a high prevalence in South-West Nigeria particularly in Lagos State [6.].

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This is the unfortunate situation Nigeria finds herself today and has imperatively led to deterioration in public confidence with regard to the industry's level of service which remains an on-going unresolved issue.

The Federal Government of Nigeria observed this ugly situation and prepared a National Building Code for construction industry that will effectively regulate the process of design, approval, construction, land use and occupancy, location and maintenance of all buildings and structures taking into consideration the traditions, culture, technological and economic circumstances of Nigeria.

The code provides the minimum standard for building pre-design, design, construction and post-construction with a view to ensuring quality, safety and proficiency in the building industry but the professionals in the industry across the State and Local government have the duty to practice their profession in accordance with laid down rules, procedures and ethical code of conduct which the National Building Code entails [4] hence the lack of National Building Regulation has become a major factor contributing to incessant collapse of building all over the country while only Lagos and Enugu States have building by-laws, which became operational before independence in 1960 but added that these building by-laws have not been reviewed since Nigeria became an independent Nation [7]. [8], asserted that even after the evolution of National Building Code (NBC) buildings have continued to collapse due to lack of enforcement and non-implementation of the National Building Code because legislation is one thing while enforcement is quite another.

[9] pointed out that, Nigeria presently has in place the Nigerian Urban and Regional Planning law (Decree No. 88 of 1992) and the decree was promulgated to be a statutory umbrella for regulating and controlling land developments all over the country. Although the document is comprehensive and covers all our developmental needs, [7], observed that the planning regulation confirmed the fact that the regulation is mainly concerned with development control and not building regulations that can take care of building control in Nigeria.

Moreover, study by [10] revealed that in most developing countries like Nigeria, enforcement of construction permits and control of construction operations continue to be complex globally, creating widespread opportunities for discretion, quackery and unprofessional practices, corruption and ultimately leading to high numbers of disastrous building-related incidents thus basic parameters enforcement is a daunting task.

While the results from construction regulations continue to be poorly measured throughout the world, best-practice reforms of construction regulations and control are correlated with better outcomes. This is the case in Ontario, Canada, following its 2001 reforms of construction regulations; province authorities recorded a 40 percent reduction in accidents within the building industry and a decline of 15 percent in fire inferno in 2002 [10].Therefore, efforts to improve the industry image are associated with improved levels of best practice of building control and industry practitioners' compliance with building-control regulations.

In Lagos State, the practice of building control is tailored to a set of definite goals based on the present state of the built environment. Policies and framework are designed and implemented to guide the system of building control towards the desired goals and also to improve on the shortcomings of the existing system. The

existing system (known as development control) has been limited in its operation because the spatial arrangement in the growth and development of a city and control of land-use has been its major focus, [11] defined Development Control as a mechanism to maintain standard laid down by legislation which regulates the development of land-use and building and are professionally carried out by Town Planners in order to ensure compliance with the approved master plan thereby ensuring orderliness. It is therefore observed that Development Control would yield minimal positive result when used as a mechanism for curbing the occurrence of building collapse in the built environment.

The recognition of the limited success of past attempts for effective planning and development of the State perhaps motivated the Lagos State government to initiate and pass the Lagos State Urban and Regional Planning and Development (URPD) Law (2010) which provides for the administration of physical planning, urban development, urban renewal and building control in Lagos State under the control of the following authorities: Lagos State Physical Planning Permit Authority (LASPPA); Lagos State Building Control Agency (LASBCA) and Lagos State Urban Renewal Authority (LASURA).

The effort was a significant leap in recognising inherent challenges of the past structure by specifically reorganizing the development assessment procedures and the subsequent separation of the hitherto confused roles and functions of relevant agencies and authorities particularly the separation of planning and building control agency [12]. Hence the need to evaluate the institutional framework of Building Control Practice, identify and examine its degree of enforcement and compliance to the building-control regulations.

II. Literature

Series of studies by various researchers in different countries had also shown that the construction industry generally performs poorly and not up to standard [13, 14] and building quality has become a significant issue worldwide over the last few decades. The lack of attention to 'quality control' in the building sector and decline in the knowledge of the building code among builders remains a contentious issue as the industry output is typified by defective work and poor quality workmanship [15, 16].

Thus the need for improved performance and quality within the total building process has led to the evolution of regulations and subsequent adoption of quality assurance in building work [17]. But, the deplorable state of Nigeria's built environment through the frequent occurrence of building failure or collapse [7, 18] and some recent striking accidents in buildings in some parts of Europe; has brought the importance of quality control in building construction on high agenda that effective system of building control cannot be overlooked in achieving this goal [19].

To ensure that buildings in Lagos State are designed, constructed and maintained to high standards of quality and safety through its building regulatory system, Section 47 part III of 2010 Lagos State Law empowers the control agency to carry out the following responsibilities: enforcement of building control regulation, inspection and certification of building works, issuance of certificate of completion and fitness for habitation, removal of illegal and non-conforming buildings, among other activities

through their choices of enforcement strategies within the law.

Moreover, the ultimate impact of any regulatory policy depends not only on how that policy has been drafted and designed, but also on how enforcement officials take actions to implement those policies at the 'street-level' [20].

Enforcement practice, as related to construction, is the most fundamental of an enforcement concept and can be easily observed in the field and consists of activities such as supervising field staff, carrying out inspections, issuing notices of violation and field citations and providing technical assistance among others. [21] conceptualize regulatory enforcement concept as composed of enforcement practice and a set of strategies made by enforcement agencies. [22] defined enforcement practice as the character of the day-to-day interaction of inspectors with regulated entities and this vary within individual countries – from one regulatory agency to another, across regional field offices of the same agency, and even among individual inspectors in the same program.

This is similar to the findings of [23] that building control practices vary widely and that a number of local governments do use the discretion they have available to facilitate new construction and other related construction activities. Therefore the different enforcement practices and the enforcement decisions of agencies differ with respect to specific enforcement strategies and levels at which they are enforced [24]. In other words, enforcement practice consists of combinations of the strategies that agencies pursue, either explicitly or implicitly, to enhance their effectiveness in bringing about compliance. As noted by [22], in an extensive review of the literature, this has proven to be one of the more problematic concepts.

The strategy is considered as a bundle of discrete choices concerning such things as inspection, technical assistance and use of deterrence. According to [21], the iterative cluster analysis to identify enforcement strategies in practice is grouped into strict, creative and accommodative strategy. Strict strategy is noteworthy for their emphasis on standardization of fieldwork and provision of technical assistance; creative strategy stand out for their use of flexible enforcement practice and use of incentive, though both strict and creative strategy possess a relatively large doses of deterrence feature; and accommodative strategy used more flexible enforcement practice.

Therefore, the agency-level choices that have been identified as elements of different enforcement strategies, the tools of enforcement (use of sanctions and incentives, provision of information), priorities for enforcement (who to target and what to inspect for), and the degree of effort involved in carrying out enforcement i.e. the allocation and leveraging of enforcement resources[24, 25, 26, 27, 28]. The degree of effort refers to the vigour with which agencies pursue enforcement [21, 24, 29, 30, 31]. Hence, the enforcement strategies for building control practice is measured by a set of index that correspond to different actions identified in the enforcement literature which are standardization and supervision, deterrent enforcement, technical assistance, discretionary enforcement and use of incentives [21] and analyses under different variables.

III. Methodology

Descriptive research approach was used for the study in which a field survey was conducted

using a set of questionnaire. The survey was carried out by total enumeration of 72 construction operating firms on the list of Lagos State Tender Board, purposive sampling (snowballing techniques) of 33 consultants operating in the study area and 80 personnel of the Building Control Agency across the 56 Local Government Areas (LGA's) and Local Council Development Areas (LCDA's) were randomly selected.

A set of questionnaires were administered to the construction practitioners (contractor and consultant) and personnel of LASBCA to sample their opinion on the institutional framework, degree of enforcement and compliance with building control regulation within the study area using the frequency, percentage and Weighted Sum Model and out of 185 questionnaires administered, 117 were returned and used for the analysis.

A. Weighted Sum Model:

The analysis of rating indicated by the personnel of the agency adopted a 5 point Likert's scales method. The scales were computed as 1= Not Very Serious, 2= Not Serious, 3= Serious, 4= Very Serious, 5= Very Much Serious were used for determining the predominant challenges facing the building control practice.

Weighted summation makes the 'incomparable' attributes comparable [28] and can be prioritized by assigning weights and reducing the amount of information by aggregating the weighted standardized scores. This process provides not only a ranking of the alternatives, but also comprehensibility and the strengths and weaknesses of the policy alternatives [29]

This is mathematically expressed as:

$$\text{SWV} = \sum_{i=1}^{5} x_i y_i \quad (1)$$

where SWV is the Summation of Weight value;

x_i is the number of respondents to rating i; y_i is the weight assigned to a value (i =1, 2, 3, 4, 5).

The index for each objective thus takes a value of between 5 and 1.

IV. Analysis of Findings and Discussions

A. Institutional Framework of the practice

i. Parties involved in Operation

Result from table 1 revealed that some private bodies (14%) such as building collapse prevention group, professional bodies and the general public are involved in the building control operations while local authority /agency (86%) is responsible for ensuring compliance with building regulations. Thus, building control practice in Lagos state is entirely administered and enforced by Local Authority District Council as in Northern Ireland and Scotland.

Table 1: Parties Involved in the Building Control Operation Variable

Variable	Frequency	Percentage (%)
Do you have any private bodies involved in the control operation?		
Yes	8	14
No	49	86
Total	**57**	**100**

ii. Procedures for Building Control Practice

From Table 2, it can be inferred that the most predominant building control procedures employed by the agency are monitoring and certification of various stages of building works (86%), issuance of certificate of fitness for habitation (68.4%), advice on mitigation

measures (65%), periodic test to determine the integrity of structure (65%) and authorization of commencement of work (56.1%) and these predominant procedures are in accordance with the Lagos State Building Control Regulation 2011. Though, the code of control practice covers the inspection and certification aspect of the building control regulations but the stage certification has not been effective, in the real sense of it, due to some identified problems like poor staff strength and poor monitoring among others [31].

Table 2: Procedures Predominant in LASBCA

Procedures	F	Agree		Disagree	
		N	%	N	%
Monitoring & certification of various stages of building works	57	49	86	8	14
Issuance of certificate of fitness for habitation	57	39	68.4	18	31.6
Advice on mitigation measures	57	37	65	20	35
Periodic test to determine the integrity of structure	57	37	65	20	35
Authorization of commencement of work	57	32	56.1	25	43.9
Assessment of quality & adequacy of proposals	57	26	45.6	31	54.4
Payment of assessment fee	57	26	45.6	31	54.4
Records and documentation	57	25	44	32	56
Registration for notice to commence construction	57	19	33.3	38	67
Payment of processing fee	57	16	28	41	72
Payment of registration fee	57	13	22.8	44	77.2

Legend: **F** = Number of personnel sampled; **N** = Number of personnel that agree or do not agree with the use of a particular procedure; **%** = Percentage, expressed as a percentage of **F** for each role.

iii. Enforcement Activities of the Building Control Practice

From Table 3, the respondents' level of agreement on the predominate enforcement activities the agency engages in for the control practice were: issue and serve notice of violation (98%); issue and serve stop work order (93%); take prior record of violated construction activities (63%); provide one-on-one technical assistance on construction site (61.4%); issue and serve notice of corrective action (60%); give intensive training about agency policy and procedure (51%). This result reveals the provision of Lagos State Building Control Regulation (2011) on the enforcement tools (the use of sanctions, technical assistance, provision of information and effective communication) for the effective implementation of the control practice in the study area.

Table: 3: Enforcement Activities in LASBCA

Enforcement activities	F	Agree		Disagree	
		N	%	N	%
Issue and Serve notice of violation	57	56	98	1	2
Issue and Serve stop work order	57	53	93	4	7
Take prior record of violated construction activities	57	36	63	21	37
Provide one-on-one technical assistance on construction sites	57	35	61.4	22	38.6
Issue and Serve notice of corrective action	57	34	60	23	40
Give intensive training about agency policy and procedure	57	29	51	28	49
Record attitude of violator in decision to prosecute	57	28	49	29	51
Spend time on site to develop good relation	57	25	44	32	56
Revocation of building permit	57	23	40	34	60
Give temporary restraining order	57	23	40	34	60
Provide one-on-one technical assistance during plan review	57	20	35	37	65
Infraction field citation or fine	57	20	35	37	65
Revocation of certificate of occupancy	57	13	22.8	44	77.2
Give cost reward on building regulation compliance	57	12	21	45	79

Legend: **F** = Number of personnel sampled; **N** = Number of personnel that agree or do not agree with a particular enforcement activity; **%** = Percentage, expressed as a percentage of **F** for each role.

B. Degree of Enforcement of the Building Control Regulation

This was done by obtaining information on the frequency of inspection, mode of inspection and the level of effort the agency put into the tools of enforcement to achieve their goal.

Survey result from the Table 4 shows that stage inspection of building works(58.5%) is considered to predominant in enforcing the control practice while Table 5 shows that the

mode of inspection employed by LASBCA were: Issue and Serve stop work order (94.3%); Issue and Serve notice of violation (74%);

Table 4: Frequency of Inspection

Frequency	F	Agree		Disagree	
		N	%	N	%
Throughout the construction process	53	14	26.4	39	73.6
At every critical stage of the construction process	53	31	58.5	22	41.5
Based on request by contractor or developer	53	8	15	45	85
At inception and completion of project	53	15	28	38	72

Legend: **F** = Number of personnel sampled; **N** = Number of personnel that agree or do not agree with a particular procedure; **%** = Percentage, expressed as a percentage of **F** for each role.

Table: 5 Mode of Inspection by LASBCA

Mode of Inspection	F	Agree		Disagree	
		N	%	N	%
Issue and Serve notice of violation	53	39	74	14	26
Issue and Serve stop work order	53	50	94.3	3	6
Take prior record of violated construction activities	53	13	24.5	40	75.5
Provide one-on-one technical assistance on construction site	53	15	28.3	38	71.7
Issue and Serve notice of corrective action	53	29	55	24	45
Give intensive training about agency policy and procedure	53	11	20.8	42	79.2
Record attitude of violator in decision to prosecute	53	6	11.3	47	88.7
Spend time on site to develop good relation	53	7	13	46	87
Revocation of building permit	53	12	22.6	41	73.4
Give temporary restraining order	53	25	47.1	28	52.8
Provide one-on-one technical assistance during plan review	53	14	26.4	39	74
Infraction field citation or fine	53	8	15	45	85
Revocation of certificate of occupancy	53	6	11.3	47	88.7
Give cost reward on building regulation compliance	53	2	3.77	51	96.3
Give booklet describing code enforcement procedure and policies	53	6	11.3	47	88.7
Preliminary or permanent injunction	53	9	17	44	83

Legend: **F** = Number of personnel sampled; **N** = Number of personnel that agree or do not agree with a particular enforcement activity; **%** = Percentage, expressed as a percentage of **F** for each mode

Issue and Serve notice of corrective action (55%) which is more of a deterrent form of enforcement practice and the overzealous use of deterrence can foster resentment and retaliation thereby leading regulated groups to apply political pressure to reduce enforcement or repeal the offending regulatory programme [21]. Therefore other forms of enforcement practice (technical assistance and communication) were not embraced in actual practice as stated in the Lagos State Building Control Regulation (2011) and this might hinder the optimum balance and achievement of the regulation goal.

i. Level of Effort Applied on the Enforcement Tools

It could be deduced from the study that the degree of enforcement of building regulations by the agency is carried out through the inspection of every critical stage of the construction project by employing the provision of information (2.49) and use of sanction (3.19) on the construction professionals and the general public as strong and predominant enforcement tools.

This result is in line with the report of [21,24] which indicate that the critical factor with respect to degree of enforcement is not only the level of overall effort local authority/agency expend on enforcement but also the frequency of inspection. This is because the frequency of inspection serves as a proxy for the likelihood of detection of violation.

Table 6: Level of Effort Applied on the Enforcement Tools by LASBCA

Measures	VL	L	M	H	VH	SWV	MS	MD	RANK
Sanction	5	7	14	17	8	169	3.19	1.35	1st
Provision of information	13	12	17	6	4	132	2.49	1.05	2nd
Technical assistance	17	17	12	5	1	112	2.11	0.89	3rd
Incentive	25	18	4	3	1	90	1.70	0.71	4th
Average MS = 2.37									

Legend: VL = Very low, L = Low, M = Moderate, H = High, VH = Very High, MS = Mean Score, SWV = Sum Weight Value, MD = Mean Deviation.

Also communication and effective interaction (provision of information) among industry players will smoothen the success of the control practice.

C. Degree of Compliance with the Building Control Regulation

V. Conclusion and Recommendation

The study concluded that, the building control practice in Lagos State was at variance on the enforcement tools and mode of inspection with the provision of the Lagos State Building Control Regulation (2011) Law. Nevertheless, this practice to a large extent has the prospects

Table 7: Level of Compliance by Contractors with the Inspection Process

Construction Stage	VL	L	M	H	VH	SWV	MS	MD	RANK
Reinforcement work	1	3	25	18	6	184	3.22	1.31	1st
Finishes	2	3	28	9	7	163	2.85	1.16	2nd
Internal & External wall	1	4	30	13	2	161	2.82	1.15	2nd
Concrete work	1	6	23	17	2	160	2.80	1.14	3rd
Windows & Door fittings	1	6	24	14	3	156	2.74	1.12	3rd
Roofing and Closing up	2	5	30	11	1	151	2.65	1.08	4th
Staircase	4	4	34	7	1	147	2.58	1.05	4th
Suspended floor slab	1	7	29	9	1	143	2.51	1.02	5th
Foundation and basement	-	11	24	11	1	143	2.51	1.02	5th
Cavity wall construction	1	6	27	7	4	142	2.49	1.02	5th
Setting out	3	7	32	5	1	138	2.42	0.99	6th
Electrical installation	-	6	31	7	1	138	2.42	0.99	6th
Mechanical installation	1	7	28	8	1	136	2.39	0.98	6th
Fencing and hoarding	3	12	19	10	2	134	2.35	0.96	6th
Average MS = 2.45									

Legend: VL = Very low, L = Low, M = Moderate, H = High, VH = Very high, MS = Mean Score; SWV = Sum weight Value, MD = Mean Deviation.

The levels of compliance with the critical stages of construction by the contractors or developers were on: reinforcement work (3.22); finishes (2.85); internal and external work (2.82); concrete work (2.80); window and door fittings (2.74); roofing and closing up (2.65); staircase (2.58); suspended floor slab (2.51); foundation and basement (2.51). These results shows that structural stability and aesthetics are the major tasks they engage in, in the real sense of the practice and this practice gives enough attention to achieving the objectives of the building control regulations.. Hence the practice is on a good course as it will curb the frequent incidences of building collapse.

of enhancing the quality of building project delivery once every critical stage of work is captured in inspection and certification effectively according to the building regulation. The study hereby recommend that schedule/program of work should be included with the necessary building documents that ill be submitted for approval in order to enhance the effective capturing of every critical stage of work during construction.

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